DOCUMENT RESUME

ED 334 744 EC 300 490

AUTHOR Mann, James W.; Harley, Randall K.
TITLE Enhancing the Career Development and School-to-Work Transition for Blind and Low Vision Youth.
INSTITUTION Mississippi State Univ., Mississippi State. Rehabilitation Research and Training Center on Blindness and Low Vision.
SPONS AGENCY National Inst. of Handicapped Research (ED), Washington, DC.
PUB DATE 86
CONTRACT G0081102981
NOTE 86p.
PUB TYPE Information Analyses - ERIC Clearinghouse Products (071) -- Reference Materials - Bibliographies (131)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Adults; *Blindness; *Career Development; Career Education; Educational Planning; *Education Work Relationship; High Schools; Individual Needs; Partial Vision; Transitional Programs; *Visual Impairments; Vocational Adjustment

ABSTRACT

This monograph serves as a guide to career development and transition planning for youths with blindness and low vision. An introductory chapter provides a sketch of the history of organized work for the blind in America as well as a set of narrative definitions of terms frequently used in the literature of special education, vocational education, and rehabilitation. The second chapter examines the career development literature related specifically to individuals with blindness and low vision. Chapter 3 looks at discrepancies and needs from an adult adjustment approach. The fourth chapter is devoted to the need for career development, career education, and school-to-work transition programs. Finally, chapter 5 offers recommendations for enhancing career development and transition programs for blind and low-vision youths. The monograph also provides a list of 70 references and an annotated bibliography citing 87 of the more significant writings since 1965 on such topics as higher education, mobility, multihandicapped individuals, and vocational education as these areas relate to career development. (Includes 75 references.) (JDD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED334744

Enhancing The Career Development And School-To-Work Transition For Blind And Low Vision Youth

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
James W. Moon
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

EC 300 490

MISSISSIPPI STATE UNIVERSITY

ENHANCING THE CAREER DEVELOPMENT AND SCHOOL-TO-WORK TRANSITION FOR BLIND AND LOW VISION YOUTH

BY

DR. JAMES W. MANN

PROFESSOR OF SPECIAL EDUCATION AND DIRECTOR, RESEARCH AND TRAINING CENTER FOR THE HANDICAPPED

UNIVERSITY OF MISSISSIPPI

AND

DR. RANDALL K. HARLEY

PROFESSOR OF SPECIAL EDUCATION

GEORGE PEABODY COLLEGE OF VANDERBILT UNIVERSITY

Development of this document was supported by the Rehabilitation Research and Training Center Grant (G0081102981) from the National Institute for Handicapped Research, Department of Education, Washington, DC. Opinions expressed in this document are not necessarily those of the granting agency.

1986

Copyright © 1986

All Rights Reserved by

Mississippi State University
Rehabilitation Research and Training Center
on Blindness and Low Vision

P. O. Drawer 5365, Mississippi State, MS 39762

Development of this document was supported by the Rehabilitation Research and Training Center Grant G008103981 from the National Institute for Handicapped Research, Department of Education, Washington, D.C. Opinions expressed in this document are not necessarily those of the granting agency.

Mississippi State University does not discriminate on the basis of race, marital status, color, religion, national origin, sex, age, or handicap.

PREFACE

This monograph is designed to serve as a guide to acquaint special education teachers, rehabilitation counselors, parents, and administrators on issues and strategies relevant to career development and transition planning for youth with blindness and low vision. Some of the material is applicable to youth having other handicaps who need assistance in the career development area.

The text begins with an introductory chapter that, in part, exposes the reader to current concepts in this area. The second chapter focuses on the career development literature related to blindness and low vision. A look at discrepancies and needs from an adult adjustment approach is included in the next chapter. The fourth chapter is devoted to the need for career development, career education, and school-to-work transition programs, in part based upon statements from leaders in the field. The last chapter deals with recommendations for enhancing career development and transition programs for blind and low vision youth.

The Appendix is an annotated bibliography of recent relevant writing specific to blindness and low vision on such topics as higher education, mobility, multihandicapped and vocational education as these areas relate to career development. Since each reader has a unique situation,

additional information may be needed on an individual basis. However, many special education teachers, rehabilitation counselors, and concerned parents are unaware of recent career development, career education, and school-to-work transition issues affecting blind and visually impaired youth and may not be conversant with the specialized information needed to avoid critical errors in planning career development and guidance programs for this group.

This monograph, therefore, should serve as a guide to the issues involved and the alternatives available in planning for the security, stability, and the "quality of vocational life" for blind and low vision youth.

ACKNOWLEDGMENTS

This monograph for enhancing the career development and school-to-work transition of blind and low vision youth is another in a series of collaborative projects of the University of Mississippi's Research and Training Center for the Handicapped and the Rehabilitation Research and Training Center for Blindness and Low Vision located at Mississippi State University. Our efforts continue to focus on enhancing the employability of blind and low vision individuals. Without support and encouragement from many persons associated with these Research and Training Centers this project would not have been initiated or completed.

Special gratitude is expressed to Mr. John Maxson, Associate Director of the Rehabilitation Research and Training Center for Blindness and Low Vision, who read the original manuscript and offered helpful suggestions for improving the final text of this report. Mr. Maxson devoted considerable time and attention to this review.

Randall K. Harley

James W. Mann

TABLE OF CONTENTS

Preface iii

Acknowledgements v

Chapter

1. Introduction 1

2. Career Development and Transition from School to Work Literature: The Blind and Visually Impaired 7

3. Adult Adjustment Approaches to Career Development and Transition from School to Work . . 17

4. Need for Career Education, Career Development, and School-to-Work Transition Programs . . 29

5. Recommendations for Implementing Career Development, Career Education, and School-to-Work Transition Programs for Blind and Visually Impaired Youth 39

References 49

Appendix 55

CHAPTER 1

INTRODUCTION

The beginning of organized work for the blind in America is usually set at 1828, the year in which the Massachusetts legislature passed a bill incorporating the New England Asylum for the Blind. The doors of the asylum (later called Perkins School for the Blind) opened to students in 1832. Subsequently, other states soon followed this model. The first schools in the United States, like the first school in France in 1784, were founded on the philosophy that the blind should learn skills that would enable them to work. However, it soon was apparent that students leaving the schools for the blind were unable to find employment. It was felt that one solution to this problem lay in adding a new program to the services provided by these schools. Scott (1969) stated:

> . . . residential schools began to build their own workshops, in which they trained their graduates for industrial employment. Perkins opened a workshop in 1840; the New York Institute followed suit in 1845. . . . In addition, many other states that did not have residential schools began to support workshops and other special facilities for employing the blind.

The American Foundation for the Blind (1969) reported:

> As late as the turn of this century, those few blind persons who were employed were found mostly in sheltered facilities and in such occupations as piano tuning, broom making, and chair caning. A few totally blind graduates of schools for the blind achieved competitive employment.

> Of that small group, the number of congenitally blind was very limited. The majority were blind persons with a past history of work who had established themselves prior to their loss of sight. Those with no history, with the exception of a few very remarkable persons, had difficulty in relating to a work environment.

The major federal impetus to employment resulted from the Vocational Rehabilitation Act of 1920 and its subsequent amendments. Each amendment continued and expanded this federal-state program. As each amendment was passed, Congress expanded the original act that required public and private agencies to develop more comprehensive services and provide for new services such as professional personnel preparation, research and demonstration projects. Rehabilitation and treatment centers, workshops, diagnostic programs, and comparable facilities and services were increased or created in all states. Large numbers of training programs and employment opportunities were opened for blind and otherwise visually impaired persons.

The past 15 years have been more satisfying and productive for educators and rehabilitators who have advocated the basic principles of career education and transition services for the blind and visually impaired. With the large numbers of blind and visually impaired youth currently attending public schools, present trends should result in the provision of greater accommodation and quality career development programs for these students.

Although the author recognizes the tremendous progress that has been made to date, much more must be done for blind

and visually impaired youth. Public schools, rehabilitation agencies, training facilities, and other programs should practice and encourage maximum career development opportunities for all blind and visually impaired youth of our society.

Definition of Terms

The following terms have been used frequently in the literature of special education, rehabilitation, and vocational education: work/study programs, career education, independent living, vocational transition, and career development. Although these are in common usage, many current variations in definition are found. Only the more relevant terms, those frequently used, and definitions in vogue were selected for inclusion in this section.

Work/study program. The term work/study program (Altman, 1970) refers to any organizational scheme whose goals and procedures are oriented toward easing the school-to-work transition for its pupils/clients. In some instances, the program is entirely supported and operated by a single agency--usually either the public school or a rehabilitation agency. The most typical arrangement is a three-way agreement involving an independent school district, the state department of special education, and the state division of vocational rehabilitation. Since the passage of the Vocational Education Act of 1968, many states have also become involved in four-party agreements which include the state department of vocational education.

Career education. While there is no current universally accepted definition, at a National Conference on Research Needs in Career Education for the Handicapped sponsored by the Bureau of Education for the Handicapped at Princeton, New Jersey, Hoyt (1974) reported that the U.S. Office of Education had accepted the following definition: "Career education is the totality of experiences through which one learns about and prepares to engage in work as part of her or his way of living."

Independent living skills. Independent living skills refer to those activities that decrease an individual's dependence upon other people (e.g., grooming, cooking, and home management skills) as well as activities that allow the individual to use generic community services (e.g., mobility and shopping skills) (Vogelsberg, William, & Bellamy, 1982).

Vocational transition. Will (1984), Assistant Secretary of Education, Office of Special Education and Rehabilitation Services (OSERS) describes transition as a period that includes high school, the point of graduation, additional post-secondary education or adult services, and the initial years of employment. She points out that transitions are an important part of life and involve roles, locations, and relationship changes. Everyone must adapt. She further outlined the three major components of the transition process between high school and employment: no special services, time-limited services, and ongoing services. Wehman, Kregel, and Barcus (1985) defined transition as:

> . . . a carefully planned process, which may be initiated either by school personnel or adult service providers, to establish and implement a plan for either employment or additional vocational training of handicapped students who will graduate or leave school in three to five years; such a process must involve special educators, vocational educators, parents, and/or the student, an adult service system representative, and possibly an employer.

Mulkey (1985) stated:

> Transition from school to work is specific training designed to enhance cooperative skill development for special educators and rehabilitation personnel. The desired outcome is improved service strategies for specified clientele.

The key elements of transition are (a) systematic vocational training throughout the middle and secondary school years, (b) cooperative and interagency transition teams, (c) parent, consumer, and employer involvement in the transition planning process, and (d) community and professional awareness and support of multiple employment options.

Career development. Career development is a developmental process; it is an "aggregate of an individual's total development--cognitive, affective, and psychomotor." Significant deprivation in any aspect of growth can affect career development.

Attributes that are most important are a strong foundation in academic skills, a meaningful set of personal values, positive attitudes toward self and others, good work habits, satisfying and satisfactory human relationships, knowledge of occupational and leisure alternatives, knowledge of the nature and realities of the world of work, and skills for daily living as well as for a job.

The developmental approach is offered as a rationale for career education and as a framework for school-to-work transition for the blind and visually impaired youth and is justified by the unique needs and problems of the blind. These include delays, uneven development and special skills needed for communication, mobility, demands of daily living, personal-social education, and needed work activities.

Finally, the authors feel that the concepts of career development, career education, and school-to-work transition cannot be "purified" and stand in isolation from one another. In this report a review of literature, need, and career development of blind and visually impaired youth are by necessity included in all three.

CHAPTER 2

CAREER DEVELOPMENT AND TRANSITION FROM SCHOOL TO WORK LITERATURE: THE BLIND AND VISUALLY IMPAIRED

The goal of this chapter is to provide a brief review of the recent career development literature in the field of education and rehabilitation of blind and visually impaired persons. An overview of the career development movement for the blind is discussed. Finally, the developments during the past few years concerning the transition from school to work emphasis are briefly reviewed. The concept of career development and transition programs which were promoted by the federal government since the early 1970s applies equally to visually impaired children. Since their efforts encompass education and training for life roles, including daily living skills and academic and vocational skills, they must become better integrated and focused for all visually impaired students at every level.

Between 1965 and 1985, the advancement of career development thought in the education of visually impaired students was reflected by various nationwide projects. Significant programs, manuals, professional meetings, publications, and related activities are highlighted in the following paragraphs. Because of space limitations, only a sample of the literature is included.

Much of the literature describes school programs that have been designed to provide information and develop skills related to career development in residential and day school programs. The procedures and curricula used in these programs which have been generally reported as being successful may be helpful to professionals who are designing similar programs.

St. Joseph's School for the Blind (1981) cooperated with the Occupational Center of Hudson County to establish a model transitional prevocational training program for severely multihandicapped, visually impaired students. The aim was to assist these students to move from a school environment to a work activity setting where gainful employment opportunities exist. St. Joseph's established a separate vocational component as part of the comprehensive educational services provided by the school. The prevocational component was designed to develop the students' work skills in order for them to realize their optimal potential, maximize their independent functioning, and move toward employment. It was intended that this would minimize or substantially delay the need for institutional care during their adult years. The training in the acquisition of work skills was provided by the schools in a self-contained simulated work activities setting on the school campus. This site served as the initial transitional phase from the classroom to a work environment. The actual transition to a work setting in the community was gradually implemented by the school in cooperation with the occupational

center. A significant conclusion drawn from the study was that non-sighted students needed additional training in a one-to-one ratio (compared to the two-to-one student-teacher ratio of the program). Problems with the program included scheduling difficulties and interfering behaviors of some of the students.

McCarron and Hurst (1985) reported the field testing of curriculum in preparing visually multihandicapped students for work. This program included behavioral competencies, occupational awareness, skills training in neuromuscular development and in perception of spatial relationships, and applied mathematics. Illustrative worksheets, checklists, and tables could be very helpful to career development educators.

The Ohio State School for the Blind (1983) integrated career concepts throughout the overall curriculum for grades kindergarten through 12. The career and vocational education curriculum objectives were as follows: knowing and exploring careers, understanding the world of work, identifying realistic career goals, exhibiting appropriate skills and/or training, and developing employability skills. The school's programs were based on stages of career development paralleling stages of human development. In addition to skill development courses, experiential learning, and work-experience programs, testing of students' interests and abilities is provided.

Lockett and Rudolph (1980) described development of

a work practice center for visually impaired multihandicapped adolescents in a residential school for the blind. The purpose of the center is to develop an acceptable level of work habits and skills for adult placement in sheltered employment settings. Six stages in program development were traced: intake information, vocational service questionnaire, prevocational skills assessment, synthesis of information, inservice training, and ongoing data collection.

Russell (1972) evaluated a one-year, five-county vocational program for visually handicapped, junior high, secondary, and junior college students designed to encourage skill development of the student and inservice training of the regular instructor. Evaluation was by means of two questionnaires to which 53 vocational educators, 62 nonvocational educators (teachers of the blind and administrators), and 65 student teachers and prospective teachers responded. Two of the six conclusions were that partially sighted and blind students can be successfully integrated into regular programs and that regular vocational educators would enroll blind and partially sighted pupils if they received inservice training. To further vocational education for the visually handicapped, project evaluators made nine recommendations of which the following are three examples: to replicate similar projects into other regions, to develop an itinerant inservice team at the state level, and to develop career vocational materials for the handicapped.

Ethridge (1979) presented a career development program

for visually impaired elementary school children. The rationale and brief descriptions of units in foods, construction, hand tools, entertainment projects, and other careers are included. It was explained that in most cases students are taught one or two basic skills related to each career studied. The author concluded that elementary and intermediate visually impaired children can learn much that will be valuable in future planning for specific careers.

Woal (1974), writing in the Vocational Guidance Quarterly, reported on his career development program. This program provides partially sighted junior high school students with information about 400 occupations. The program included opportunities for development of a positive self-image, interaction with sighted peers, identification with successfully employed visually handicapped persons, and field trips to firms employing handicapped workers.

Abrams (1979) described the development and content of a comprehensive development education program for blind elementary and secondary students. Eight areas are explored in the program: job search skills, job behavior, hygiene and grooming, purchase habits, budgeting, banking, home management, and health care.

A number of manuals and modules have been developed to assist in the teaching of career awareness and planning. Some of these illustrative manuals are described. A study of these manuals should also provide professionals assistance in designing curricula for similar programs.

Swearengen (1977) developed the CI-TAB (Career Information and Training Activities for the Blind) Secondary Program, a program providing career development for visually handicapped and blind high-school students that is available in braille and cassette recordings. Five general discussions (each including a list of concepts covered, suggested learning activities, and a list of test questions) are provided on the following topics: (1) producers and consumers, and goods and services; (2) employment agencies, job placement services, unions, and social security; (3) resumes, application, and interviews; (4) job classifications and volunteer service; and (5) independence, responsibility, and freedom. Each of 30 job descriptions included answers to the following questions: What must this worker do? How many hours must this person work? How much will this job pay? What abilities will I need? What else is important about this job? What are the prospects and opportunities? How can I prepare for this job, and what other jobs are similar to this? Also included are general suggestions for career education and a list of approximately 50 sources of supplementary vocational materials.

Career Planning for the Blind: A Manual for Students and Teachers was written in 1966 by the Administrator of Education and Professional Placement Service of the New York Association for the Blind (The Lighthouse). This manual was designed for use in classroom situations, tutorial settings, or by rehabilitation centers as an informal training program. It also forms the basis for a correspondence study course as

offered by the Hadley School for the Blind. Included in the manual is information on evaluating the labor market and the world of work and a presentation of methods and techniques for selecting a job. Chapters deal with such topics as (1) What is a career? (2) Factors that may contribute to individual success, (3) Should you have help in getting a job? and (4) New careers in business or self-employment. This manual also includes a workbook for career planning.

Baker, White, Reardon, and Johnson (1980), in their self directed career planning program manual for the visually disabled, described the goal of their project as translating the values, purposes, and resources of the Curricular/Career Information Service of the Florida State University into formats that could be easily used by the visually impaired. The manual details the four tasks of the project: (1) transcription and organization of career information; (2) development of an assessment device (Self Directed Search or SDS) that could be taken, scored, and interpreted by a blind student; (3) formation of a large type and braille alphabetical catalog; and (4) evaluation of these materials and goals.

Kirkman (1983) developed Career Awareness Models for the Visually Impaired Students. Special career awareness and career exploration activities were developed for blind and visually impaired elementary and secondary students during 1982 and 1983. Thirteen career awareness models were developed for use in regular class settings, along with modules for students on career clusters and career

identification and job placement. The materials were field tested in residential schools for the blind and in regular schools with mainstreamed visually impaired students. The materials should assist special educators to understand the role and scope of career awareness activities, especially as they relate to the regular instructional program, and should help prepare students for an appropriate career while informing them about the total work world.

Professional conferences, task forces, institutes, and other related activities have also been helpful. Some illustrative examples of these activities that have been largely sponsored by the American Foundation for the Blind follow.

A National Conference on Career Education was held in New Orleans, Louisiana, in 1973. Reports from 10 states were presented on present status of and future plans for career education for blind and visually handicapped children and adults. The reports represented a major aspect of a conference sponsored by the American Foundation for the Blind in which state leaders in special education, rehabilitation, and vocational education considered strategies for collaborative efforts. Ongoing programs, the roles of the three component divisions, state needs assessments, and timetables for future programs were typically considered. States with the most extensive cooperative services were Maryland and Illinois. These states have either existing programs or pilot programs offering occupational information from kindergarten on, prevocational work-study programs, and, in the case of Illinois,

systematic monitoring and evaluating of career education activities in public schools.

Recent emphasis on career development in elementary and secondary schools has led the American Foundation for the Blind (AFB) to promote activities to develop relevant resources and materials for use with blind and partially sighted students. AFB advocacy has included employment of career education specialists, formation of a Task Force on Career Education, investigation of career education units developed in Ohio and Texas, and a current mini project to test use of career education units in the curricula of six state residential schools for the blind. Their efforts to relate the visually handicapped to the world of work centered on all aspects such as vocational education, work-experience programs, on-the-job training and placement opportunities.

AFB's recent project (Simpson, Huebner, & Roberts, 1985) is entitled "Collaborative Planning: Transition from School to Work." The AFB transition project staff is currently holding institutes to include all 50 states. Their thrust is that with representative state leadership input, a systematic process, realistic goals, and community support, collaborative planning effort will contribute significantly to the transition of blind and visually impaired youths from school to the world of work. AFB's Journal of Visual Impairment and Blindness published a special issue on career development in December, 1985.

The Rehabilitation Research and Training Center in

Blindness and Low Vision has developed its program around the Career Development Intervention Strategies Model to provide updated information for practitioners. The Mississippi State University program provides training for direct service personnel in education and rehabilitative services linking program efforts through career development.

CHAPTER 3

ADULT ADJUSTMENT APPROACHES TO CAREER DEVELOPMENT AND TRANSITION FROM SCHOOL TO WORK

The adult adjustment approach uses adult adjustment criteria as the ultimate objective for determining what skills and competencies are present or absent, and which are needed in a handicapped person's life career. These skills and competencies then become the basis for a career education curriculum.

Typical of the depressing statistics regarding handicapped youth was Barone's (1973) presentation to the President's Committee for the Employment of the Handicapped. He reported that of the 2.5 million handicapped youth who will leave public school systems in the next four years, 21% will be either fully employed or enrolled in higher education, 40% will be underemployed and at the poverty level, 8% will lie in their home communities idle much of the time, 26% will be unemployed and on welfare, and 3% will be totally dependent and institutionalized.

Viscardi (1976), at the annual meeting of the President's Committee on Employment of the Handicapped, reported that the best available figures indicated that only 4 million of the 11 million employable age handicapped citizens were actually working, and many of these were underemployed. These and other available figures reveal that a significantly

greater proportion of handicapped individuals are not working when compared to those who are not handicapped.

Studies have also been conducted on those problems that have caused handicapped individuals trouble on their jobs. Kokaska (1971) surveyed the difficulties of 1,251 retarded individuals. Importantly, it should be noted that less than one fourth of those studied had any significant problem. However, of the problems identified, 33% were due to poor personal and social skills, 23% were due to poor work habits, and 44% were deemed to be the fault of employers, coordinators, or parents. Other studies of job failure in mentally retarded populations have indicated that most retarded individuals lose their jobs, not because of inability to do the work but rather because of a failure to adjust to the social demands of the world of work (Gold, 1973; Kolstoe, 1961). Moss (1980) reviewed the results of a six-year experimental vocational training project and reported that the most important qualities which relate to job successes or failures are speed of performance; general attitudes relating to the employer, co-workers, and the work situation; and the ability to follow instructions. Other studies have shown poor personal hygiene (Kolstoe, 1961), lack of family support (Brolin, 1974; Moss, 1980), tardiness and absenteeism, and poor interpersonal relationships as other important indicators.

Vocational adjustment research has also indicated the importance of personal-social and daily living skills as significant determiners of vocational success. Studies such as

those by Kolstoe (1961) and Brolin (1978) have clearly indicated the importance of personality characteristics, social skills, and independent living skills as crucial to vocational and community adjustment.

Support for the appropriateness of educational programs with an occupational emphasis has been demonstrated and indicates that former students in programs for the mentally retarded have a relatively good employment adjustment if provided with more occupationally oriented preparation (Chaffin et al., 1971). Although the study by Brolin (1974) found a relatively high incidence of poor vocational adjustment in a metropolitan area, this study also noted that among those who had received a work experience-oriented program in contrast to an academic program, the former group had a significantly better overall degree of vocational adjustment.

In addition to other arguments for the provision of career development programs for handicapped youth, there is also a very strong economic argument. In an extensive cost-benefit analysis, Conley (1973) found that the rehabilitation of the retarded is worthwhile in most cases on the grounds of increased earnings alone. Conley determined that each dollar expended on the vocational rehabilitation of a mildly handicapped male under 25 years of age increased the present value (in 1972 dollars) of his estimated earnings by over $14.00 per week. Among mildly handicapped young women, the comparable figure was approximately $8.00 per week.

The estimated cost of institutionalization (in 1972 dollars) of a mentally retarded individual for a lifetime is approximately $400,000. In contrast, Conley showed that a mentally retarded male entering the work force at 18 years of age in 1970 could expect lifetime earnings of $600,000 (1972) dollars.

The Rehabilitation Services Administration, for example, issues annual reports that give statistical data regarding the status of clients upon completion of services through the federal-state rehabilitation program. In 1984, the report revealed that 225,772 handicapped persons were rehabilitated at a cost of $1,037,800,000. These persons were placed in jobs representing most major occupational groups.

These annual reports also present information regarding the number of referrals, the number of cases, and the size of the federal grant for each participating state rehabilitation agency. The reports further reflect the increasing interest and participation of the federal government and various state agencies in programs of services to handicapped persons. This is revealed by a comparison of the 1954 and the 1984 annual reports. In 1954, there were only 55,825 persons rehabilitated at a cost of approximately $35,000,000.

Follow-up Studies of Blind and Visually Impaired Persons

The study of blind persons who have completed rehabilitation services has been the topic of many survey studies. Many of these were conducted by public rehabilitation agencies

as a means of evaluating their programs, securing data for public information, or meeting the legal requirements for reporting and accounting.

Most of the state agencies have prepared statistical reports similar to those prepared by the Rehabilitation Services Administration. The skills and competencies needed for employment are not well illustrated by such reports.

Research on blindness and blind individuals published during the past five or six decades generally reflects two orientations. These are (1) clinically based studies and (2) empirical studies. The former tends to incorporate those observations of a clinical nature as illustrated by the classic works of Cutsforth (1951), Wright (1960), Carroll (1961), Lowenfeld (1955), McCauley (1960), and Bauman (1963). The vast majority of current publications are of this type. Clinically oriented studies are of unquestionable value in terms of their particular objectives but lack scientific methodology.

Comparatively little work is reported in the literature that involves an objective framework, where emphasis is placed upon empirical, measurable phenomena. Studies of this type have been accomplished by Hayes (1941, 1950), Bauman (1963), Suinn, Dauterman, and Schapiro (1967) and Knowles (1966).

Kaufman (1956) supplied a pertinent follow-up study. His purpose was to appraise the personal-social, educational, and vocational adjustment of blind veterans. Specifically,

he investigated the differences in adjustment of those who participated in the Veterans Administration's Vocational Rehabilitation Program and those who did not. Among other findings, Kaufman reported that veterans who did not participate in this program were better adjusted vocationally. His subjects were restricted to small segments of blinded veterans residing in a limited geographical area. Further, his sample by reason of age, general health, agency services received, conditions under which blindness occurred, and general vocational feasibility would be considered probably dissimilar to the population of blind persons served by local and state agencies.

One study (MacFarland, 1956) attempted to compare the work efficiency of totally blind and sighted persons. His subjects included 38 blind workers in a five-state area who were in direct competition with sighted workers. He concluded that this small number of blind subjects were as well adjusted and efficient as their sighted peers. He reported, however, that the workers "had ample experience to enable them to compete on the highest level of their capabilities." These totally blind workers on the basis of preselective factors were, to begin with, a vocationally well-adjusted group.

A large-scale study involving the investigation of 1,949 war-blinded veterans was published in 1958 by the U.S. Veterans Administration in which characteristics of World War II and Korean War veterans were tabulated and studied. This report is descriptive in nature but incorporates

comparisons of those veterans who were employed versus the group who remained unemployed. The procedure included the use of an interview schedule of over 100 items and a cross tabulation of the results. A complete report of personal characteristics is presented in this publication as well as a comparatively thorough descriptive analysis.

In terms of descriptive numerical analysis, the researchers reported they found no universal or controlling variables. They concluded, however, that "two classic institutions of society appear to be extremely powerful in the rehabilitation process. One is strong family ties, especially when the dependency of children is one of the responsibilities of the blinded veteran. The other factor is education before blindness" (U.S. Veterans Administration, 1958, p. 195).

Rusalem's (1959) studies on the adjustment of deaf-blind adults give some useful information on this particular type of disability. He enumerated the characteristics of deaf-blind persons at the Industrial Home for the Blind (New York City) and presented data on work adjustment as revealed by personal observations and objective materials. He also obtained equivalent information on 12 subjects who worked outside the Industrial Home for the Blind. Rusalem clearly demonstrated the employability and work efficiency of deaf-blind persons in a sheltered workshop setting.

Using files from a New York state rehabilitation agency as a source of basic data, Reid (1960) conducted a

study to examine successful and unsuccessful vocational rehabilitation. Many personal data were reported on the almost 200 cases involved. Reid concluded that the two most important factors for success are general good health and personality factors.

Bauman and Yoder (1962) gathered personal data through interviews and observations from 408 legally blind individuals employed in 14 professional occupations that included law, science, teaching, music, business, etc. The criterion used for selection in their study was that the persons should have "achieved the same financial success and the same recognition in their profession that a sighted person might have been expected to achieve if he practiced that profession for the same number of years." Their publication was designed to be a descriptive, practical aid to blind individuals and workers in the field. Within each vocational section, an extensive treatise of such variables as job description, employer, hours of work, assistance in work, aids, etc. is provided. No inductive statistics were employed on the data since the study was devoted entirely to descriptive analyses of successfully rehabilitated blind individuals, and no broad conclusions were drawn as to why individuals in this general area of employment are successful.

In 1963, Bauman published a work entitled Characteristics of Blind and Visually Handicapped People in Professional, Sales, and Managerial Work. This effort resulted from the same research project reported in conjunction with

Yoder (1962). Included in this second volume are descriptive statistical data and tests for significance between such characteristics as sex, age, amount of vision, and nature of education for a sample of 434 individuals. Bauman also reports attitudes of interviewees toward blindness, education, counseling, etc. Results of this descriptive analysis indicated that younger people were somewhat ahead of their elders in terms of educational level, relative personal adjustment, and professional establishment. However, in considering vocational rehabilitation, Bauman (1963) summarizes:

> Shall we not conclude, then, that none of the characteristics we can count, such as amount of vision, amount of education, cause of visual loss, etc., makes the difference between success and failure? If it were possible (and we very much wish it were possible) to study an equal number of blind persons who have not succeeded, we would probably find the same proportions with these basic life characteristics.

She also concluded that her sample achieved success through "dogged persistence, through years of effort, and in the face of unnumbered rebuffs."

McPhee (1963) conducted a study concerned with the adjustment of vocational rehabilitation clients in Utah, Montana, and Wyoming. He selected a sample of persons who had different types of handicaps and who were either rehabilitated or did not complete services during the period of July 1, 1949, to June 30, 1954. Among his findings, the author reported that the fully employed were younger and better educated; 64% of the fully employed rehabilitants had worked for the same employer; health was found to be a factor

in the unemployment of the rehabilitants; and the visually impaired had a much lower divorce rate than rehabilitants with other types of disabilities.

A survey of the vocational success of 644 legally blind adults (Scholl, Bauman, & Crissey, 1969) has revealed that more than half of the males surveyed were employed in 13 occupations, while more than half of the females were in only nine occupations. Furthermore, 87% of the persons interviewed in that survey earned less than $8,000 per annum for their principal job (at a time when the median U.S. income was $8,400 per annum).

Clayton (1973) reported on a survey of former students at the Maryland School for the Blind on their suggestions for change and improvement. Recommendations for future students include greater and earlier exposure to the world of work, greater emphasis on social development, and greater opportunities for students in making decisions regarding their conduct and future.

Wacker (1976) surveyed 300 former blind adults of a vocational training agency to evaluate the effectiveness of the rehabilitation effort in terms of the former client's vocational status in society. Goal setting proved important in job achievement and the level of job realism can reflect a blind person's ability to function effectively and independently in a competitive work environment.

Gillman, Simon, and Shinn (1978) reported on a follow-up of 44 individuals with multiple handicaps with visual

limitations. Significant factors that correlated with success and definitions of employment at any job or enrollment at any school or rehabilitation program were age at entry, amount of remaining vision, and activity prior to program entry.

Giesen, Graves et al. (1985) collected extensive background and service data on 619 blind and legally blind clients of state rehabilitation agencies of four states representing varied geographic areas and populations. Analysis of data revealed that actual work status at closure could be predicted in 60% of the instances utilizing predictors such as age at referral, last occupational goal, total vocational quotient, sex, years disabled prior to referral, number of disabilities in addition to blindness, highest grade completed, on the job training, proximity to counselor, wage category at referral and whether or not the individual received institutional training.

Summary

Upon reviewing previous research in the area of vocational rehabilitation of the legally blind, it was found, almost without exception, that conclusions were drawn from the evaluation of (1) descriptive-numerical or (2) verbalized interview data. These studies support a position that visually impaired persons demonstrate abnormal and inadequate vocational development and a higher incidence of vocational immaturity.

To illustrate further what appears to be unsatisfactory vocational outcomes of the visually impaired populations as a whole, a number of surveys (Buell, 1954; Fitting, 1955; Kirchner & Peterson, 1980; Scholl, Bauman, & Crissey, 1969) have discovered rates of unemployment far in excess of those for the general population, with that rate sometimes reported in the range of 40% to 50% (Hatlen, 1971; Hyman, Stokes, & Strauss, 1973; Kirchner & Peterson, 1977).

There also seem to be few data on vocational mobility reflected in the literature. It is suspected that there is very little upward mobility either intergenerational or intragenerational. It is likely that downward mobility exceeds that amount of upward mobility. It is easy to be misled by the success stories of a few talented blind and visually impaired people. Those with brilliant careers can lead one to believe that more upward mobility exists than is actually the case.

CHAPTER 4

NEED FOR CAREER EDUCATION, CAREER DEVELOPMENT, AND SCHOOL-TO-WORK TRANSITION PROGRAMS

The U.S. Chamber of Commerce (1975) lists the following problems as reasons why career education offers a promising response for educational reform.

1. For too many youth, career exploration begins after leaving school instead of during the early learning years when there is ample time to develop areas of work interest and competence.

2. Youth unemployment is consistently four times greater than adult unemployment, and turnover is high.

3. Many students are not provided with the skill and knowledge to help them adjust to changes in job opportunities.

4. There has steadily developed an increased emphasis on "school for schooling's sake" . . . education has become, for many students, simply preparation for more education.

5. In some schools, much of what happens in the classroom has too little to do with what is happening outside the classroom.

6. Seventy-six percent of secondary school students are enrolled in a course of study that has, as its major emphasis, preparation for college--even though only 2 out of 10 jobs through the 1980s will require a college degree.

7. The drop-failure rate among college students remains among the most stable of all statistics in American education. Forty percent of all who enter college this fall will not make it to their junior year, and fifty percent will never obtain a baccalaureate degree.

The Chamber of Commerce recommended career education for all students to reduce the gap between unrealistic educational programs and career needs and to provide students with insight, information, and motivation concerning specialized training, as well as professional education.

Hoyt (1980) justifies career education through the following criticisms of American education:

1. Too many persons leaving our education system are deficient in the basic academic skills required for adaptability in today's rapidly changing society.

2. Too many students fail to see meaningful relationships between what they are being asked to learn in school and what they will do when they leave the educational system.

3. American education, as currently structured, best meets the educational needs of that minority of persons who will someday become college graduates. It fails to place equal emphasis on meeting the educational and life needs of that vast majority of students who will never be college graduates.

4. American education has not kept pace with the rapidity of change in the postindustrial occupational society. As a result, when worker qualifications are compared with job

requirements, we find overeducated workers are present in large numbers. Both the boredom of the overeducated worker and the frustration of the undereducated worker have contributed to growing worker alienation in the total occupational society.

5. Too many persons leave our educational system at both the secondary and collegiate levels unequipped with the vocational skills, the self-understanding and career decision making skills, or the work attitudes that are essential for making a successful transition from school to work.

The preceding discussion is intended to reflect opinions about the need for career education, career development, and transition programs for all students at a national level. For handicapped students it is more imperative, as viewed by leaders in services for handicapped children and adults.

Martin (1973) predicted from the best possible estimates available that only 21% of the handicapped children leaving school between 1972 and 1976 would be fully employed or go on to college; 40% would be underemployed; and about 26% unemployed. He predicted an additional 10% would require at least a partially "sheltered" setting and family, and 3% (75,000) to be almost totally dependent.

A few years later at the National Topical Conference on Career Education for Exceptional Children and Youth, Martin, speaking for the U.S. Bureau for the Education of the Handicapped, advocated redefining our basic instructional services to handicapped students so they would receive more

employment-directed vocational programs. The Bureau gave further impetus to involving handicapped students in career education by establishing that "by 1977, every handicapped child who leaves school will have had career educational training relevant to the job market, meaningful to his career aspiration, and realistic to his fullest potential."

The Education for All Handicapped Children Act of 1975 (Public Law 94-142) has numerous implications for career education programming. For example, federal funds are to be used to supplement and expand existing services to handicapped students, including developing close working relationships with parents and other advocacy groups. In addition, the act provides funds for inservice training for staff including general and special educational instructional and support personnel.

The Rehabilitation Act of 1973 and the 1978 amendments require state vocational rehabilitation agencies to give special emphasis and priority to serving the severely handicapped and authorize rehabilitation research and demonstration funds to discover, test, demonstrate, and promote utilization of new concepts and devices that will provide rehabilitation services to handicapped individuals. This federal-state program is directly involved in career education for blind and visually impaired youth.

A "paper marriage" occurred in 1977 between the Rehabilitation Service Administration, the federal agency charged with the responsibility for the Rehabilitation Act,

and the U.S. Bureau of Education for the Handicapped, the federal agency charged with the responsibility for P.L. 94-142, the Education for All Handicapped Children Act. The agencies issued a "memorandum of understanding," recognizing the fact that they have many common responsibilities to handicapped persons. This memorandum proclaimed, "Education agencies are concerned with the overall life adjustment of handicapped young persons within their communities, including their ability to become employed." Vocational rehabilitation agencies are concerned with enabling handicapped individuals--particularly the severely disabled--to prepare for and engage in employment. These concerns are clearly compatible, and every effort should be made to coordinate available services.

The Council for Exceptional Children jointly sponsored with the American Vocational Association a National Topical Conference on Career Education for Exceptional Children and Youth. This conference launched career education at a national level for handicapped individuals. In January, 1975, the Bureau of Education for the Handicapped sponsored another important conference for leaders in the field of education for the handicapped entitled The Conference on Research Needs Related to Career Education for the Handicapped. A list of top-priority needs was identified and served as a focus for the U.S. Office of Education.

The Council for Exceptional Children (CEC) has given further advancement to the career education movement by establishing a new division within the organization. This is an

example of efforts by CEC to make career education a reality and to promote career essentials for handicapped individuals.

Another organization reflects the importance career education has achieved in American education. The American Vocational Association approved the National Association of Vocational Education Special Needs Personnel (NAVESNP) within its organization. This group is making significant strides in promoting conferences, publications, and inservice/pre-service efforts so vocational educators can more adequately serve handicapped students.

Title I of the Education Amendments of 1976 contains the amendments to the Vocational Education Act of 1963 and is particularly significant. These amendments require that funds used for vocational education of the handicapped be expended in a manner consistent with the state plan for the education of the handicapped. It mandates the expenditure of at least 10% of the state allotment for 50% of the costs of vocational education for handicapped persons.

The need for career education was also evidenced with the passage of the Career Education Implementation Incentive Act (PL 95-207) in 1977. This law provided funds for career education in the public schools. State education agencies are required to make sure that career education is part of the local instruction throughout the curriculum. In developing this legislation, Congress declared: "A major purpose of education is to prepare every individual for a career suitable to that individual's preference . . . career education should

be an integral part of the Nation's educational process which serves as preparation for work."

Expanding career opportunities and vocational education for the blind and visually impaired are prime concerns of professional personnel in this area. The level of vocational development and general concern with this topic are highlighted in the following publications.

A nationwide survey (Rehabilitation Research and Training Center in Blindness, 1980) of over 200 organizations involved in services to blind and visually impaired persons provided ample testimony to the dire career and vocational concerns of many leaders in this field. Among the top priority areas noted as concerns were unemployment and underemployment of blind and visually impaired persons, employment support services, career growth, job development, and job identification.

In comparing two national surveys, Kirchner and Peterson (1980) of the American Foundation for the Blind reported a wide gap between labor force participation and employment status. It was noted that less than one-third of the working age blind and visually impaired population is found in the labor force, while the sighted labor force participation is 75%. The author speculates that this gap is related to discrimination, discouragement, and disincentives to work.

Davidson (1975) discussed the unsatisfactory employment outcomes for visually impaired adolescents and revealed

the following employment status of the visually impaired: most individuals' annual earnings are low, occupational variation is limited, and unemployment rates greatly exceed those of the general population.

Corn and Bishop (1985), after administering the Occupational Schedule (OASIS-IS) to 117 visually handicapped 8th-12th graders, found that they generally showed relatively undifferentiated occupational interests. However, this group showed marked preference for repetitive factory work which might reflect a lack of exposure to occupational alternatives.

Visually impaired women were found to perceive themselves as having substantially more barriers to employment than their sighted counterparts (Corn, Muscella, Cannon & Shepler, 1985). This perception could have a critical impact on their pursuit of work.

In summary, all states have career education coordinators, work-study, and transition school-to-work programs, and career development concepts which are not included in ongoing curricula. New organizations and journals, research projects, instructional materials, and national conferences give testimony to continued activity in career education in the middle eighties. Despite these efforts, blind and visually impaired citizens have ample problems joining society as contributing citizens. The need for the schools and rehabilitation agencies to do a better job with this population is obvious. If blind individuals are to achieve their rightful place in society, much remains to be done.

Blind and visually impaired students fit into these schemes as readily as any group and they stand to gain from their offering. Further, it is critical that such programming be provided. Those interested in their welfare, however, must move aggressively into the area of career education development if there is to be a significant impact on their careers. To accomplish this, career education curricula must give equal consideration to the mutually important aspects of career development: attitudes, values and habits, human relationships, occupational information, acquiring a job, and daily living skills.

The authors would like to conclude with a word of caution. There is reason to believe that some public education officials assume that work should be the basic theme of career education because of the political realities of the times, rather than because that view reflects their personal educational philosophy. They are sensitive to the fact that Congress, state legislatures, and local school boards respond more readily to educational programs that address current problems in unemployment, economic recession, work alienation, and welfare support than programs that emphasize life roles and life careers. In addition, such concepts as career education, career development, work-study programs, and school-to-work transition are not static and mutually exclusive terms in spite of the efforts by local, state, and federal educators and rehabilitators to pin such terms down through official statements.

CHAPTER 5

RECOMMENDATIONS FOR IMPLEMENTING CAREER DEVELOPMENT, CAREER EDUCATION, AND SCHOOL-TO-WORK TRANSITION PROGRAMS FOR BLIND AND VISUALLY IMPAIRED YOUTH

Career education in the 70's and transition in the 80's have gathered steam, but there is much to do before they will become a reality for many blind and visually impaired youth. Comprehensive career development and transition services, career education programs, vocational counseling, vocational evaluation, referral services, rehabilitation and placement services hold the promise of making a significant contribution to the education/career decision making for this group.

Although it is impossible to predict and chart the career education and school-to-work transition maps in every case, the following is a list of thrusts which could immeasurably assist a blind or visually impaired youth's career development. This list is based, in part, on available research, current practice, and the suggestions and recommendations of numerous parents, consumers, and professionals in special education and rehabilitation.

Parent Involvement

Parents are important in career development and transitional activities (Moon & Beale, 1984). Parents with blind and visually impaired youth can help them become more

competent by the following actions: emphasizing the development of coordination, assigning specific jobs/duties around the home; identifying jobs performed by various workers, visiting job sites, and discussing them in detail at home; providing a variety of family projects and activities to develop leisure, recreation, and social skills; insisting that the individual make his own decisions, investigate alternatives, and understand consequences; providing positive reinforcement for successful work; demonstrating the importance of values in decision-making and modeling positive attitudes and habits; and stressing the importance of positive human relationships and self-control.

Role of Rehabilitation Personnel

Rehabilitation personnel should be encouraged to provide consultation and direct assistance in their areas of expertise both within and outside the school setting. If the career development of blind and visually impaired youth is to succeed, there must be a "marriage" between special education and rehabilitation.

While informal advisors, such as a blind person's peers, and especially his family, help him define his goals and initiate him in the ways of our society's institutions, they frequently do not have important information or objectivity. Blind youth would make better career decisions if they had clearer occupational goals, improved information about career paths, and assistance in implementing their

choices by rehabilitation personnel with knowledge of the "world of work realities."

Individual Educational Program (IEP)

Because IEPs must be developed in the IEP conference, career educators and rehabilitators must work with those involved in the IEP decision-making process. Members of the team may vary depending on the needs of the individual. Parents should be members of the team to participate actively in the transition plan and are a valuable resource.

At the secondary level, the IEP should include a transition plan for each student. This plan should identify each aspect of the transition process, including agency responsibilities such as on-the-job training, summer workshop experiences, mobility, etc.

The transition plan should be part of both the IEP and the Individual Written Rehabilitation Plan (IWRP) when the student reaches age 14 (Mann, 1985).

Extended Day IEPs

In making educational programming decisions under P.L. 94-142, courts define the term "appropriate education" broadly to include not only the teaching of academics and vocational skills, but such nonacademic skills as self-help, social, interpersonal, independent living, orientation and mobility training. The components of an appropriate education program for blind and visually impaired youth, in many cases, must include an "Extended Day" IEP, and incorporate nonacademic skills training (Mann, 1985).

Prevocational and Vocational Training

Most blind and visually impaired youth can and must achieve prevocational and vocational skills. The vast majority of multiply handicapped visually impaired youth can learn the skills needed to become effective workers through special training programs which are based upon task analysis, easy-to-hard discrimination, errorless learning, etc.

Some program characteristics which contribute to effective vocational training have been identified by various authors (Wehman, Bates, & Renzaglia, 1985; Wilcox & Bellamy, 1982). McCarthy, Everson, Moon, and Barcus (1985) summarized five of these critical characteristics of a successful vocational training program:

1. A thorough and on-going process of community analysis is used to identify local industry and job trends and to develop a vocational curriculum which reflects skills identified in the local community.

2. A longitudinal training program is used that begins at the elementary level and is systematically expanded throughout the school years.

3. Systematic and behavioral training procedures including a commitment to data based programming are implemented.

4. Students develop and practice work skills with nonhandicapped workers in integrated community job sites.

5. An individualized transition plan is developed

and implemented to insure systematic transition from school to support employment and adult services once students leave school.

School Programming Before High School

Social and communication skills, mobility, independent living skills, and work habits of blind and visually impaired youth have an important bearing on their vocational skills. The reinforcement of these skills must begin in the elementary school and continue through the secondary years for all blind and visually impaired students (Moon & Beale, 1984; Wehman & Pentecost, 1983). Some guidelines for teachers and parents at the pre-high school level are:

1. Make sure that vocational training is part of the IEP in the earliest school years.

2. Make certain that the IEP addresses self-care and independent living skills and functional academic and social skills that are needed in the work place.

3. Emphasize the importance and rewards of work and create opportunities for students to see and learn about different vocations.

4. Let students sample at school and at home a wide array of "work skills" applicable to realistic jobs. Creating a schedule of work duties and demanding completion of duties within a time frame teaches young students the importance of work quality and rate.

5. Begin training skills in all curriculum areas

outside the classroom. Integration into the community and training in natural settings at early stages of learning will promote generalization of learning and acceptance by other people.

6. Train communication, self-care, mobility, and recreation skills. Teach all of them within the context of job training whenever possible. By the seventh grade make sure the IEP addresses specific vocational training in a variety of potential jobs related to realistic employment options in the local labor market.

7. Begin working with high school personnel to identify possible permanent job placements. Make sure the transition from middle to high school programs is smooth and appropriate.

8. Identify a "vocational track" for each student so that more specific job training can occur at the high school level.

9. Work on general work habits such as neatness, promptness, and responding to criticism but within the context of specific job training. Use systematic instructional methodology and a data based system to monitor the learning of general work habits and specific skills. Documentation of learning can be used later to assure appropriate job entry.

Training at the Secondary Level

Rehabilitation centers and workshops are appropriate for many students while they are in secondary programs. For

multihandicapped blind and visually impaired students, these facilities must be utilized to teach the necessary life career development competencies. Direct service staff should, for this group, provide community referenced instruction. Multiple training and types of work available in the area should occur in real work settings. A report from the Rehabilitation Research and Training Center at Virginia Commonwealth University indicates a significantly higher job retention rate for those individuals who had community based training prior to job placement versus those who received segregated in-school training only (Hill, Hill, Wehman, Banks, Pendleton, & Britt, 1985).

An independent living program at the secondary level should be designed and put into operation. This program can be coordinated at residential schools for the blind with the housing staff and the daily living skills instructors. The program should be designed in such a way that by the time a student is a senior in high school, he will be able to live successfully for 9 to 18 weeks in an independent living apartment with only minimum supervision (Mann, 1985). Quality high school training can make a tremendous difference in how early in adulthood a persons with severe disability will be able to work for competitive wages (Wehman, Bates, & Renzaglia, 1985).

Some guidelines at the secondary level are:

1. Develop a transition team composed of a student, parents/guardians, teacher, rehabilitation counselor, and

other appropriate professionals to insure movement from school to an appropriate job or post-school training program.

2. As part of the development of the transition plan, identify existing job options and target needed ones.

3. Provide daily training in job-sites in several job categories that are realistic permanent job possibilities for the students.

4. Within the context of job-site training, focus on improving work quality and production rate. As well, make sure that a student develops endurance and stamina.

5. Prepare job placement files with references, descriptions of acquired skills, work history, and assessment information.

6. Follow-up on all graduates to make sure they are either employed or are receiving job placement services.

7. Formulate a formal, written plan that specifies how a student will be trained and placed in a permanent job upon graduation. This transition team specifies who is responsible for each goal/objective of this plan and a time-line for completion of each goal/objective of the plan. This plan should be part of both the Individual Education Plan (IEP) and the Individual Written Rehabilitation Plan (IWRP) during the secondary years.

8. Design a special course workshop geared to the career needs of blind and visually impaired youth around such areas as (1) the need to build up self-confidence and healthy social attitudes; (2) the need to raise educational

standards within individual capabilities; and (3) the need to discover attitudes, aptitudes, attainments, and aspirations in the work situation.

9. Provide blind and visually impaired high school students with activities that unify basic subject areas with career development concepts and adult living skills. Every student should be provided with intensive preparation in a selected occupational cluster or a specific job preparation for job entry and/or further training.

Summary

In summary, career education and transition services designed for blind and visually impaired youth have been subject to increased attention. National conferences and professional groups have addressed key issues. The definitions, paradigms, and practices associated with the topics of career education, career development, and school-to-work transition have become more sophisticated and pragmatic. However, deficits in the services network persist. The continued improvement of career development activities becomes imperative for all educators and rehabilitation personnel who believe that the "freedom to choose--and to change--one's occupational choices are among the most sacred of all freedoms available to our citizens" (Hoyt, 1980). Moreover, career development provides a potentially powerful weapon to combat unemployment and underemployment and to better prepare visually impaired and blind youth to enjoy economic parity and

personal satisfaction as members of society. It is not a panacea, but adequate career education and school-to-work transition programs can be an effective tool in removing existing barriers to career equality for blind and visually impaired youth in today's society.

REFERENCES

Abrams, K. (1979). CI-TAB: View for the blind. Education of the Visually Handicapped, 11(1), 23-27.

Altman, R. (1970). Bibliography of cooperative work/study programs for the mentally retarded throughout the United States. Austin, TX: University of Texas.

American Foundation for the Blind. (1969). Employment of blind and otherwise visually impaired persons: Policy statement. New York: Author.

Baker, S., White, P., Reardon, R., & Johnson, P. (1980). An evaluation of the effectiveness of an adaptation of the self-directed search for use by the blind. Rehabilitation Counseling Bulletin, 23(3), 177-182.

Barone, S. (1973, October). Employment perspectives for the handicapped. Paper presented to a forum organization sponsored by the Vocational Evaluation and Work Adjustment Association, the National Rehabilitation Association, and the President's Committee for the Employment of the Handicapped, Washington, DC.

Bauman, M. K. (1963). Characteristics of blind and visually handicapped people in professional, sales, and managerial work. Harrisburg, PA: Pennsylvania Office for the Blind.

Bauman, M. K., & Yoder, N. (1962). Placing the blind and visually handicapped in professional occupations. Washington, DC: Department of Health, Education, and Welfare.

Brolin, D. E. (1974). Preparing the retarded in career education (Project PRICE, Working Paper 1). University of Missouri-Columbia.

Brolin, D. E. (Ed.). (1978). Life centered career education: A competency based approach. Reston, VA: The Council for Exceptional Children.

Buell, C. (1954). Vocational preparation of students. New Outlook for the Blind, 48(4), 113-118.

Carroll, T. J. (1961). Blindness. Boston: Little, Brown, and Company.

Chaffin, J., Spellman, C. P., Regan, C. E., & Davidson, R. (1971). Two follow-up studies of former educable mentally retarded students from the Kansas Work-Study Project. Exceptional Children, 37, 733-738.

Clayton, I. E. (1973). Career opportunities for visually handicapped persons in Maryland. The New Outlook for the Blind, 67, 210-215.

Conley, R. (1973). The economics of mental retardation. Baltimore, MD: Johns Hopkins University Press.

Corn, A. L., & Bishop, V. (1985). Occupational interests of visually handicapped secondary students. Journal of Visual Impairment and Blindness, 79, 465-477.

Corn, A. L., Muscella, D., Cannon, G., & Shepler, G. (1985). Perceived barriers to employment for visually impaired women: A preliminary study. Journal of Visual Impairment and Blindness, 79, 458-461.

Cutsforth, T. D. (1951). The blind in school and society. New York: American Foundation for the Blind.

Davidson, T. M. (1975). The vocational development and success of visually impaired adolescents. The New Outlook for the Blind, 69, 314-316, 319.

Ethridge, E. G. (1979). An approach to career development for visually impaired students on the elementary level. Education of the Visually Handicapped, 10, 87-91.

Fitting, E. A. (1955). Rehabilitation status of former students at the Michigan School for the Blind, New Outlook for the Blind, 49(1), 21-26.

Giesen, J. M., Graves, W. H., Schmitt, S., Lamb, A. M., Cook, D., Copps, C., & Boyet, K. (1985). Predicting work status outcomes of blind/severely visually impaired clients of state rehabilitation agencies. Mississippi State: Mississippi State University, Rehabilitation Research and Training Center on Blindness and Low Vision.

Gillman, A. E., Simon, E. P., & Shinn, E. B. (1978). An outcome study of an intensive rehabilitation training program for young adults. Journal of Visual Impairment and Blindness, 72, 388-392.

Gold, M. W. (1973). Research on the vocational habilitation of the retarded: The present, the future. In N. R. Ellis (Ed.), International review of research in mental retardation. New York: Academic Press.

Hatlen, P. H. (1971). Proceedings of a special study institute: Conference for teachers of deaf-blind children. Sacramento, CA: California State Department of Education.

Hayes, S. P. (1941). Contributions to a psychology of blindness. New York: American Foundation for the Blind.

Hayes, S. P. (1950). Measuring intelligence, blindness. Princeton, NJ: Princeton University Press.

Hill, J., Hill, M., Wehman, P., Banks, P. D., Pendleton, P., & Britt, C. (1985). Demographic analysis related to successful job retention for competitively employed persons who are mentally retarded. In P. Wehman & J. W. Hill (Eds.), Competitive employment for persons with mental retardation from research to practice, Vol. 1. Richmond, VA: Rehabilitation Research and Training Center.

Hoyt, K. B. (1974). An introduction to career education. U.S. Office of Education Policy Paper. Washington, DC: The Office of Career Education.

Hoyt, K. B. (1980). Career education and vocational education: A re-examination. Journal of Career Education, 6(3), 178-186.

Hyman, H. H., Stokes, J., & Strauss, H. M. (1973). Occupational aspirations among the totally blind. Social Forces, 51, 403-416.

Kaufman, M. (1956). The personal-social, educational and vocational adjustment of blinded veterans of World War II. Unpublished doctoral dissertation, New York University.

Kirchner, C., & Peterson, R. (1977). Employment: Selected characteristics. Journal of Visual Impairment and Blindness, 71, 239-242.

Kirchner, C., & Peterson, R. (1980). Worktime, occupational status, and annual earnings: An assessment of underemployment. Journal of Visual Impairment and Blindness, 74, 203-205.

Kirkman, R. E. (1983). Career awareness and the visually impaired student. Education of the Visually Handicapped, 14(4), 105-114.

Knowles, L. (1966, May). Employment of blind teachers in California schools. Special Education Newsletter. Sacramento, CA: State Department of Education.

Kokaska, C. J. (1971). The need for economic security for the mentally retarded. Preparing teachers of secondary level educable retarded: Proposal for a new model. Menomonie, WI: Stout State University.

Kolstoe, P. O. (1961). An examination of some characteristics which discriminate between employed and not-employed mentally retarded males. American Journal of Mental Deficiency, 66, 472-482.

Lockett, T., & Rudolph, J. (1980). Prevocational programming for deaf-blind, severely and profoundly handicapped. Viewpoints in Teaching and Learning, 57(1), 33-42.

Lowenfeld, B. (1955). Psychological problems of children with impaired vision. Psychology of exceptional children and youth. New York: Prentice-Hall.

MacFarland, D. C. (1956). A study of work efficiency of blind and sighted workers in industry. New York: American Foundation for the Blind.

Mann, J. W. (1985). A comprehensive plan for delivery of educational and related services for blind and visually impaired children. Jackson, MS: Governor's Office of Federal-State Programs.

Martin, E. (1973). Career education: A federal priority for education of the handicapped. Speech presented at the National Topical Conference on Career Education for Exceptional Children and Youth, February 12, New Orleans, LA.

McCarron, L. T., & Hurst, J. R. (1985). Vocational readiness curriculum: Preparing visually multi-handicapped students for the world of work. Journal of Visual Impairment and Blindness, 79, 450-457.

McCarthy, P., Everson, J., Moon, S., & Barcus, M. (1985). School-to-work transition for youth with severe disabilities. Richmond, VA: Rehabilitation Research and Training Center.

McCauley, W. A. (1960). The blind person as a college teacher. New York: American Foundation for the Blind.

McPhee, W. M. (1963). Adjustment of vocational rehabilitation clients. Washington, DC: Vocational Rehabilitation Administration.

Moon, M. S., & Beale, A. (1984). Vocational training and employment: Guidelines for parents. The Exceptional Parent, 14, 35-38.

Moss, J. (1980). Postsecondary vocational education for retarded adults. Reston, VA: ERIC Clearinghouse.

Mulkey, W. S. (1985). Transition from school to work. Knoxville: University of Tennessee.

Rehabilitation Research and Training Center in Blindness. (1980). Statement of critical areas of need as basis for the long-range plan for rehabilitation research in the field of blindness. Chapel Hill, NC: Author.

Reid., E. (1960). Factors influencing vocational rehabilitation of the blind. New York: American Foundation for the Blind.

Rusalem, H. (1959). Studies in the vocational adjustment of deaf-blind adults. New York: The Industrial Home for the Blind.

Russell, G. H. (1972). Evaluation document, a five-county vocational skills training program for the blind. Santa Cruz, CA: Santa Cruz County Board of Education.

Scholl, G. T., Bauman, M. K., & Crissey, M. S., Project Directors. (1969). Final report: A study of the vocational success of groups of the visually handicapped. Ann Arbor: University of Michigan.

Scott, R. A. (1969). The making of blind men. New York: Russell Sage Foundation.

Simpson, F., Huebner, K. M., & Roberts, F. (1985). Transition from school to work, developing your state team: Why and how. New York: American Foundation for the Blind.

Suinn, R. M., Dauterman, W., & Schapiro, B. (1967). The WAIS as a predictor of the educational and occupational achievement in the adult blind. The New Outlook for the Blind, 61(2), 41-43.

Swearengen, M. (1977). The CI-TAB middle school program: Career information and training activities for the blind and visually handicapped. Louisville, KY: American Printing House for the Blind.

U.S. Department of Health, Education, and Welfare. (1972). Selected career education program for the handicapped. Washington, DC: Bureau of Education for the Handicapped.

U.S. Veterans Administration. (1958). War blinded veterans in a postwar setting. Washington, DC: Author.

Viscardi, H. (1976). The return of the disabled worker. Paper presented at the annual meeting of the President's Committee on Employment of the Handicapped, Washington, DC.

Vogelsburg, R. T., Williams, W., & Bellamy, G. T. (1982). Preparation for independent living. Design of high school programs for severely handicapped students. Baltimore: Paul H. Brookes Publishing Company.

Wacker, C. H. (1976). Breaking the competitive employment barrier for blind people. Journal of Rehabilitation, 42(3), 28-31.

Wehman, P., Bates, P., & Renzaglia, M. (1985). Functional living skills for moderately and severely handicapped individuals. Austin, TX: Pro-Education, Inc.

Wehman, P., Kregel, J., & Barcus, J. M. (1985). School to work: A vocational transition model for handicapped youth. Exceptional Children.

Wehman, P., & Pentecost, J. (1983). Facilitating employment of moderately and severely handicapped youth. Education and Treatment of Children, 6, 69-80.

Wilcox, B., & Bellamy, G. T. (1982). Design of high school programs for severely handicapped students. Baltimore: Paul H. Brookes Publishing Company.

Will, M. (1984). Bridges from school to working life. Programs for the Handicapped, 2, 1-5.

Woal, S. T. (1974). A career education program for visually handicapped students. Vocational Guidance Quarterly, 23(2), 172-173.

Wright, B. A. (1960). Physical disability--A psychological approach. New York: Harper and Row.

APPENDIX

ANNOTATED BIBLIOGRAPHY RELATED TO CAREER DEVELOPMENT AND BLINDNESS AND LOW VISION: 1965-1985

This annotated bibliography represents a resume' of the more significant writings since 1965. In general, the objective has been to compile a list which will be very helpful to the knowledgeable consumer of information on this topic.

In spite of space restrictions, sufficient annotation is included consistent with value to the reader. The results of research are briefly summarized wherever it is possible to do so; the reader should be warned against oversimplification under such circumstances.

Articles that have been published and are also available from the Educational Resources Information Center (ERIC) or the Council for Exceptional Children's (CEC) Information Center are noted, since they afford the reader convenient access. One should use the ERIC (ED) or CEC (EC) assession number when ordering the study in microfiche or hard copy.

Abrams, K. CI-TAB: View for the Blind. Education of the Visually Handicapped, 1979, 11(1), 23-27. (ED 121 534 000)
The article describes the development and content of a comprehensive career education program for blind elementary and secondary students. Eight areas are explored: job search skills, job behavior, hygiene and grooming, purchase habits, budgeting, banking, home management, and health care.

Alvir, H. P. An Evaluation Report on Special 4(B) Programs for the Deaf and Blind. Albany, NY: Bureau of Occupational Education Research, New York State Education Department, 1977. (ED 154 583)

The report summarizes the evaluation made of six special occupational education programs (five for the deaf and one for the blind) funded under Vocational Education Amendments of 1968, Part B, Section 4(B) of P.L. 90-675.

Bailey, L. A Teacher's Handbook on Career Development for Children with Special Needs: Grades K-6, 1976. (ED 128 993)

Intended for Illinois teachers of visually, hearing, or physically handicapped children at the elementary grade level. The handbook provides information for developing a career education program.

Barrage, N. C. Utilization of Low Vision in Adults Who Are Severely Visually Handicapped. New Beacon, 1975, 59(695), 57-63. (EC 072 785 0000)

The rehabilitation of partially sighted adults is discussed in terms of variables which determine effective use of residual vision. Considered are such factors as self-image, functional needs, capacity to benefit from optical aids or adaptive visual training, vocational ability, potential for independent travel, and perceptual reorganization or development. The author points out that each person with residual vision has unique characteristics and advises rehabilitation personnel to be aware of labeling problems arising from confusing definitions of "blindness."

Bauman, M. K. Guided Vocational Choice. New Outlook for the Blind, 1975, 69(8), 354-360. (ED 080 657 0000)

Many visually handicapped people never have the opportunity to make an effective vocational choice. Informed vocational choice is not possible unless the individual and those who counsel him are aware of job alternatives as well as of the individual's interests, abilities, and those personal qualities that affect job success. The information needed to make a guided vocational choice can be accumulated through an extensive history, vocational and psychological testing, and extended testing with work experiences.

Bean, A., and others. Use of Community Resources in Rehabilitation of Blind Persons. Journal of Visual Impairment and Blindness, 1980, 74(5), 196-99. (EC 124 763 0000)

In a search for alternative funding sources, the Rehabilitation Center for the Blind in Daytona Beach (Florida) turned to the local community college. The community college has supplemented or expanded the services to students of the Rehabilitation Center in three major areas: adult basic education, vocational training, and career awareness.

Bikson, T. H.; Bikson, T. K. Functional Problems of the Visually Impaired: A Research Approach, 1981. (ED 213 177)

Capabilities and limitations of 251 severely visually impaired persons (senior high school age or older) were assessed on a range of visual environmental adaptation problems to learn how they are organized and influenced. Factor analyses indicated that problems can be grouped on the basis of eight functional domains, among which an independent living skills factor accounted for most response variance. Major influences on outcomes in these domains were acuity, age, sex, education, and perceived impact of impairment on quality of life. Results suggested the usefulness of rehabilitation programs geared to activity domains rather than to vision parameters.

Boulter, E. T. The Increasing Need for Braille for Vocational Purposes. Journal of Visual Impairment and Blindness (Braille Then, Now and What Next), 1979, 73(8), 335-37. (EC 121 700 0000)

The increasing importance of braille to enable blind individuals to reach their full potential in vocational situations is stressed. Improvements in the production of braille are traced and two methods of braille printing are explained.

Brooks, A. E. Graphic Biology Laboratory Modules for the Blind, 1982. (ED 243 643)

The goal of this project was to devise new methods of producing tactile facsimiles of microscopic images for the blind and visually impaired biology students at the secondary and college levels. The numerous raised-line images that were produced were assembled along with brailled and large print student instructions, audio cassette tapes describing the lab materials and instructor suggestions into nine laboratory modules. The potential of using the methods in other sciences (mathematics, physics, chemistry, geology, etc.) as well as non-science areas (geography, history, economics, psychology, etc.) is significant.

Burrow, E., Comp.; Hill, P., Comp. Special Needs Adaptations for Office Education Teachers. Commerce, TX: Occupational Curriculum Laboratory, East Texas State University, 1983. (ED 240 369)

Intended for teachers in office education programs and those working with coordinated vocational-academic education programs, this material provides information for adapting the regular classroom, equipment, and curriculum to meet the particular needs of students with special needs. Chapters are devoted to ways for providing instruction to students with four types of handicapping conditions: hearing impaired, mentally retarded, physically

impaired, and visually handicapped. An example of how a unit of instruction may be adapted for the special needs of the students is also included. Appendixes include a reading level formula; listings of resource materials, resource organizations, articles, and special equipment and tools with their purpose and source; and information on project IMPART.

Cacich, J. C.; Dosch, T. G. A Summer Work Experience Program for Visually Impaired Students. Journal of Visual Impairment and Blindness, 1983, 77(9), 442-45. (ED 161 057 8406)

A summer work experience program for tenth and eleventh graders with visual impairments includes a 3-week residential-living experience in which students are evaluated in the areas of daily living, orientation and mobility, socialization, vocational abilities, and career planning and a 6-week segment in which students work at paid jobs.

CEC Selected Convention Papers: Annual International Convention: Visually Handicapped. Washington, D.C.: (Selected Convention Papers) The Council for Exceptional Children; NEA, 1968. (ED 031 857)

Presentations on the visually handicapped include curriculum for teachers of the visually handicapped by Evelyn Rex; a preparatory college program for visually impaired students by Walter Fitzgibbon; prevocational planning and rehabilitation for the visually handicapped by Mary Bauman; New Jersey's organization, cooperation and coordination of programs for visually handicapped by Vahram Kashmanian; teacher education by Clarice Manshardt; and research, development trends, and translation into practice of sensory aids by Leslie Clark. This unit of reports is available in microfiche.

Chapman, E. K. Visually Handicapped Children and Young People. Boston, MA: Routledge and Kegan Paul, 1978. (EC 112 471 0000)

The book, which is one of a series on special educational needs, deals with the education of the visually handicapped from preschool to higher education and vocational education. Designed for all concerned with the education of the visually impaired, the book contains the following chapters: "Visually Handicapped Children--Who Are They?" "Parents and Children," "The Development of Educational Provision for Blind and Partially Sighted Children," "The School Years for Visually Handicapped Children," "From Childhood to Adolescence," "The Visually Handicapped Adolescent," and "Assessment of the Intellectual, Social, and Educational Attainments of Visually Handicapped Children." An eight page bibliography is also included.

Charlston, S. E., and others. Training Blind and Visually Handicapped Computer Programmers, 1976. (ED 125 579)

The State of California and System Development Corporation developed, implemented, and evaluated a training program in computer programming for the blind and visually impaired. Students were selected according to general aptitude, interests, general intelligence, previous educational achievement, health, and personal qualities. The eight-month course in programming involved 120 classroom hours per month. The curriculum was modular to allow flexibility in introducing new computer technology and languages as they became available. Students record lectures on tape recorders. Closed circuit television systems for low-vision persons and the Optacon for the totally blind were used. Student retention in the program and job placement and performance were successful.

Christian, M. Breaking Through Barriers. Workers Who Are Disabled. Lincroft, NJ: Career Services for the Handicapped, Brookdale Community College, 1984. (ED 251 600)

These 12 profiles show the successes of workers with various handicaps who can serve as role models for people with disabilities and personalize knowledge for the nondisabled. Each profile begins with a brief remark by the individual on barriers and continues with his/her perspective on the work world and a discussion of his/her experiences and the set of barriers that needed to be broken. The individuals profiled include a computer engineer who is blind.

Clayton, I. Career Preparation and the Visually Handicapped Student. Education of the Visually Handicapped, 1983, 14(4), 115-120. (ED 151 325 8306)

Career preparation for blind and visually handicapped students should be included as part of the high school program. Preparation skills include work skills, basic skills, awareness of aptitudes, interest, and family/peer influences. The preparation phase culminated in the placement of the student in further education, training, and/or full-time employment. Work experience programs require the same employment process as a regular job. The identification of opportunities for further education, training, or on-the-job training of graduates would be the responsibility of a designated staff member who should be aware of problems in placing blind and visually handicapped persons.

Cochrane, H. S., and others. The Academic Advisement of Disabled Students, Institute Proceedings (Syracuse University, June 16-18, 1965), 1965. (ED 011 422)

Speeches and reports from an institute on higher education for physically handicapped students are presented. The institute was sponsored by the All-University

Rehabilitation Council at Syracuse University. Distinction is made between the responsibilities of the university and the responsibilities of the handicapped students. Reports summarize other speeches on architectural barriers, trends in higher education, and medical aspects.

Cook, J. J. Follow-Up Study of the Visually Impaired 1976. Monograph No. 5: Program Accountability in Special Education, 1976. (ED 176 489)

To provide feedback on programs for the visually impaired in Wisconsin, a follow up study was done on 98 persons who had been enrolled in such programs and who had been out of school for a period of 3 to 13 years. The study focused on adaptation and was concerned with many facets of everyday living, including such things as academic achievement, types of occupations, physical mobility, difficulties in obtaining employment or promotions, use of vocational rehabilitation and other social services, attitudes toward educational and work experiences, and social and community participation.

Cooperman, S. Biology for the Visually Impaired Student. American Biology Teacher, 1980, 42(5), 293-94, 304. (ED 224 377)

This is a description of a beginning college biology course for visually impaired students. Equipment for instruction is discussed, and methods for using the materials are included. Topics included in the course are chemical bonding, diffusion and osmosis, cell structure, meiosis and mitosis, reproduction, behavior, nutrition, and circulation.

Corley, J. Breaking Down the Barriers. Florida Vocational Journal, 1978, 3(5), 20-23. (ED 173 022)

This article concerns the removal of architectural barriers in order to accommodate handicapped students in vocational-technical education. It presents lists of barrier considerations applicable to the physically handicapped student, sight-disabled student, and hearing-impaired student.

Cotten, Paul D.; Wade, J. P. A Demonstration Work Activities Center for Multiply Handicapped, Visually Impaired Persons. Journal of Visual Impairment and Blindness, 1984, 78(7), 303-36. (EC 170 612 8503)

The article describes a continuum of services designed to meet the living and employment training needs of multihandicapped, visually impaired persons deemed ineligible for vocational rehabilitation services. The article focuses on the interagency approach and the importance of community cooperation.

Craig, R. H. Craig Examines Educating the Visually Impaired: Share Your Experience with Your Colleagues. DVH Newsletter, 1976, 21(2), 6-7. (EC 092009 0000)

An itinerant teacher of visually handicapped students trained two high school girls to work as tutors and braillists in exchange for work-study credit.

Crawford, F. L. Career Planning for the Blind: A Manual for Students and Teachers. Winnetka, IL: The Hadley School for the Blind, 1966. (ED 065 667)

Written by the Administrator of Education and Professional Placement Sciences of the New York Association for the Blind (The Lighthouse), this manual was designed for use in a classroom situation, in a tutorial setting or in a rehabilitation center as an informal training program. It forms the basis for a correspondence course as offered by the Hadley School for the Blind. The manual provides information on evaluating the labor market and the world of work and a presentation of methods and techniques for selecting a job. Chapters deal with topics such as: (1) What Is a Career? (2) Factors That May Contribute to Individual Success, (3) Community Resources, (4) Measurement and Evaluation,(5) Self-Appraisal, (6) Should You Have Help in Getting a Job? (7) New Careers in Business or Self-Employment, and (8) Planning for Retirement. Included is a Workbook for Career Planning.

Cunliffe, W. Vocational Assessment of Non-Academic Blind Adolescents. New Beacon, 1976, 60(705), 1-8. (EC 081 653 0000)

Various factors leading to the blind adolescent's being labeled "nonacademic" (not suitable for higher education) are discussed, and the program components of a vocational assessment center for blind adolescents are described. Topics covered include the definition of assessment; standardized tests; initial tests (with sample details providing for tests in such areas as light engineering, woodwork, and typing); social relationships; parental attitudes; assessment through pooled opinions of staff members; vocational guidance; and social initiative.

Davidson, T. M. The Vocational Development and Success of Visually Impaired Adolescents. New Outlook for the Blind, 1975, 69(7), 314-316. (EC 080 193 0000)

A review of the literature reveals that visually impaired adolescents are not as vocationally immature as has often been suggested. Cultural patterns of exclusion from life and work roles play a very important role in the failure of many visually impaired individuals to enter the mainstream of American life. Improvements in the career education of visually impaired persons need to be

made, as well as an organized effort to combat negative attitudes toward individuals who are visually impaired.

Dillman, C. M.; Maloney, P. Mainstreaming the Handicapped in Vocational Education. Serving the Visually Handicapped, 1977. (ED 142 766)

One of a series of seven modules developed to improve the knowledge and skills of vocational educators who are or will become involved in the instruction of handicapped students in regular (mainstream) classes, this module is intended for inservice training of vocational educators (including administrators, coordinators, counselors, and preservice trainees) working at the secondary level and focuses on developing a general understanding of the goals, components, and approaches used in regular vocational education programs involving legally blind and partially seeing students.

Employment of Blind and Otherwise Visually Impaired Persons; Policy Statement. 1969. (ED 087 177)

Presented by the American Foundation for the Blind (AFB) are background information and a policy statement on the employment of blind and otherwise visually impaired persons. The AFB policy recognizes the progress made in employment opportunities and proposes that institutions of higher learning and other training facilities offer the visually handicapped the same opportunities offered other students for learning, preparing for a career and meeting performance standards. The statement maintains that any attempts by statute, regulation, or practice to bar a visually handicapped person from employment due to visual loss is arbitrary, discrimination, and inharmonious with the current social concept of equal opportunity.

Equal Education Opportunity for All the Visually Handicapped, 1974. (ED 115 059)

The booklet contains 12 selected papers on equal educational opportunity for visually handicapped (VH) children presented at the 52nd biennial conference (June, 1974) of the Association for Education of the Visually Handicapped. Included are presentations on the following: the history and concept of equal education opportunity (B. Lowenfeld), competencies needed by teachers of VH students who may also have specific learning disabilities (J. McCarthy), assessing the chronological development of VH children's spatial concepts (K. Szatlocky), a comparative study of cognitive development among blind and sighted students (K. Simpkins and B. Stephens), new directions in services for VH infants and preschoolers (J. Brown), preschool children's cognitive characteristics (M. Poulsen), methods and materials for teaching elementary school students to read with the Optacon (G. Lutz), closed

circuit television as a low-vision reading aid (R. Schnur et al.), the use of compressed speech and a listening skills training program with handicapped students (A. Connor), career education and the handicapped (K. Hoyt--also see EC 073 115), career education of the VH (J. Best), and the impact of the Supplement Security Income Program upon rehabilitation of blind or disabled individuals (F. Crawford).

Ethridge, E. G. An Approach to Career Development for Visually Impaired Students on the Elementary Level. Education of the Visually Handicapped, 1979, 10(3), 87-91. (EC 114 612 0000)

A career education program for visually impaired elementary school children is presented. The rationale and brief descriptions of units in foods, construction, hand tools, entertainment projects, and other careers are included. It is explained that in most cases students are taught one or two basic skills related to each career studied. The author concludes that elementary and intermediate visually impaired children can learn much which will be valuable in future planning for specific careers.

Foster, D., and others. Multiple Learning Strategies Project. Small Engine Repair. Visually Impaired, 1977. (ED 158 105)

This instructional package, designed for visually impaired students, focuses on the vocational area of small engine repair. This document contains forty learning modules organized into fourteen units. Each module, printed in block type, includes a performance objective page telling what will be learned, what materials will be needed, and how the student will be evaluated; information and job step pages which provide information needed to perform the activity and detailed steps necessary to do the task. The modules are part of a total set which includes over 1,300 modules written in a variety of formats on building maintenance, dietetic assistant, small engine repair, medical assistant, and graphics.

Foster, J. C.; and others. Guidance, Counseling, and Support Services for High School Students with Physical Disabilities: Visual, Hearing, Orthopedic, Neuromuscular, Epilepsy, Chronic Health Conditions. Includes State Resource Directory. Cambridge, MA: Technical Education Research Centers, 1977. (ED 149 561)

Intended for use by high school guidance personnel, the two volumes provide general information and a resource guide on physical disabilities including visual impairment. The first section provides an overview of each of the physical disabilities and health problems. Information is given on strategies for planning, coordinating, and delivering services; inservice training; and materials.

Personnel adjustment is discussed in terms of attitudes toward persons who are physically disabled. Educational placement, course selection, and architectural accessibility are among topics considered in the section on educational planning. A chapter on career development and guidance examines such topics as special concerns in counseling disabled students, job seeking, and work oriented activities. Discussed in relation to vocational assessment are sites and components of vocational assessment and work adjustment. Topics covered in the chapter on psychometric testing include the Public Law 94-142 mandate on protection of human subjects, guidelines for nondiscriminatory testing, and specific guidelines for testing disabilities. Suggestions for job placement and parent involvement are also given. Provided are sources for ordering materials and a resource guide. A separate volume contains detailed listings of organizations and directories by state.

Gebert, J. That Somber Specter: Rubella. Community and Junior College Journal, 1984, 55(2), 23-26. (ED 307 176)

The article describes North Central Technical Institute's special programs for students with vision or hearing impairments focusing on the one-month career exploration program; daily living skills instruction; diagnostic, counseling, and support services; and job placement. It examines common misconceptions about hearing/vision impaired people.

Gillman, A. E., and others. An Outcome Study of and Intensive Rehabilitation Training Program for Young Adults. Journal of Visual Impairment and Blindness, 1978, 72(10), 388-392. (EC 112 788 0000)

An evaluation of an intensive training program for 44 multihandicapped adults who could not use other rehabilitation programs is described. Among findings reported from entry, exit, and follow-up data are that almost all clients expressed satisfaction with the program and most retained independent living, mobility, and employment skills for years after exit.

Gollay, E.; Bennett, A. The College Guide for Students with Disabilities. Cambridge, MA: Art Publications, 1976. (EC 091 941 0000)

Provided in the directory is information for disabled students on educational services, programs, and facilities of approximately 500 colleges in the United States. It is explained that all information was supplied by the colleges. Introductory sections deal with legal rights in higher education and employment, general handbooks and directories for choosing a college or graduate school, handbooks and directories specifically for disabled students, admission testing programs, sources of financial

aid for higher education, sources of learning aids and materials, information and referral agencies, nontraditional approaches to obtaining a higher education, federal agencies, state agencies, and publications relevant to disabled persons. College summary tables are organized by population served (blind, deaf, or mobility impaired) and accessibility of classrooms, library, and residences. Individual college descriptions are organized alphabetically by name within each state and include name, address, overview statistics, and information on policies, procedures, programs, and services. Appended are items such as the participation questionnaire used to collect the data and an alphabetical index of colleges.

Graves, W. H. Rehabilitation Research and Educational Services for Blind and Visually Impaired Individuals. Education for the Visually Handicapped, 1983, 14(4), 126-32. (EC 151 327 8306)

Seven research projects in progress at the Rehabilitation Research and Training Center (RRTC), Mississippi State University, focus on services and outcome-related issues pertaining to the education and employment of blind and severely visually impaired individuals. Areas of research include low vision services targeted for the workplace, pre-employment training, and vocational assessment of multihandicapped individuals.

Harris, M. E. Teaching the Handicapped in the Sciences: A Selected Bibliography of Articles, 1972-1983, 1983. (ED 231 666)

This is a selective bibliography of 91 journal articles dealing with physically handicapped students in the sciences. The educational needs of the physically handicapped sometimes require unconventional practices. The articles cited in the bibliography focus on various instructional strategies, curricular modifications, and programs designed to meet the needs of physically handicapped students in elementary, secondary, and college science subjects. Information is provided on the "Resource Directory of Handicapped Scientists" compiled and edited by Janette Alsford Owens et al. (published in 1978 by the American Association for the Advancement of Science).

Haves, R. C.; McLaughlin, P. J. Prevocational Assessment and Programming for Visually Impaired Learners, 1980. (ED 187 051)

The paper examines aspects of prevocational program development for visually impaired students (physical setting, task selection, teacher behaviors, trainee behaviors, discrimination deficits, sensory motor deficits, slow motor behavior, and interfering behaviors). Five assessment

areas are listed, including amount of teacher assistance required, number of trails to criterion, and number of steps acquired independently in task analysis for each target objective. Instructional techniques are specified for typical training problems.

Holmes, D. L., and others. Career Education in an Educational Program for Visually Impaired. Education of the Visually Handicapped, 1983, 14(4), 121-25. (EC 151 326 8306)

The Ohio State School for the Blind integrates career concepts throughout the overall curriculum for grades kindergarten through 12. The career and vocational education curriculum objectives are as follows: knowing and exploring careers, understanding the world of work, identifying realistic career goals, exhibiting appropriate work habits and behaviors, obtaining a specific occupational skill and/or training, and developing employability skills.

Inana, M. Essential Components of Vocational Counseling with Visually Impaired Students. Journal for Vocational Special Needs Education, 1981, 3(2), 7-9. (ED 245 253)

Visually impaired students can be given effective career counseling if attention is paid to five essential elements: (1) exposure to the world of work; (2) job aspirations; (3) knowledge of job availability; (4) daily living and social skills; and (5) resources.

Introducing Handicapped Persons as Paraprofessionals in Libraries: A Workshop Co-Sponsored by the California Community Colleges, Chancellor's Office, and the State Dept. of Rehabilitation, Univ. of California, Riverside, 1975. (ED 115 352)

Three workshops were held to acquaint interested parties with the growing need to prepare persons with nonstandard physical characteristics for successful employment as Library/Media Technical Assistants (L/MTA's). Included were partially sighted and totally blind persons. The scope of library services under consideration was limited to public services, technical services, and audiovisual services.

Jarmul, L. College Orientation for Visually Handicapped Students: A Summer Program at Queensborough Community College. Education of the Visually Handicapped, 1977, 9(2), 56-60. (EC 100 613 0000)

Described is a summer orientation program for blind students preparing to enter college. The program's major areas (including vocational decision making) are reviewed, and the functions of program staff (such as the director and mobility instructor) are outlined. Explained is the peer advisor's role in the dormitory program, and reported are outcomes of the program which support its success.

Jivoff, L. Precollege Orientation of Blind High School Graduates. Final Report, 1967. (ED 015 323)

Forty-seven legally blind high school graduates between 16 and 20 years of age, accepted by a college or university, participated for six-week periods in a three-year project to demonstrate the value of confronting the students with and assisting them in resolving a broad gamut of personal, academic, social, and psychological problems which occur in colleges. The program provided contact with dormitory living; registration; extracurricular activities and counseling services; library, laboratories, cafeteria, and other common campus facilities; and remedial services such as mobility training, grooming, and social modifications. Findings include (1) the blind students evidenced essentially the same pattern of interests as their sighted peers but rated higher on maturity scales, (2) their lack of proficiency in typing was a serious problem, (3) they were exceptionally weak spellers and required considerably more study time than the sighted, (4) over 91 percent were successful in remaining in college, (5) group sessions in mobility training and physical fitness were beneficial, and (6) interested, mature undergraduates were capable of working with the blind students.

Johnson, V. G., Ed.; Schlessinger, R., Ed. A University Handbook on Disabilities, 1984. (ED 250 981)

Accomodations that can aid in the learning process for disabled students at Clarion University at Pennsylvania are outlined in this handbook funded by the college's Affirmative Action Committee. Objectives of the guide are to define and describe the major disabilities including visual impairment; to identify the major problems that disabled students encounter during the academic semester; to outline disabled students' responsibilities to make teachers aware of problems that their students' disabilities may cause them in the class; and to suggest changes that may be made by faculty to accommodate the special needs of disabled students.

Kakalik, J. S.; and others. Improving Services to Handicapped Children--With Emphasis on Hearing and Vision Impairments, Santa Monica, CA: The Rand Corporation, 1974. (ED 095 689)

The second of two reports providing a comprehensive, cross-agency evaluation of federal and state programs for assistance to handicapped children, this report examines current policies and suggests alternative future policies for improved delivery of services to hearing and visually handicapped youth. Presented are extensive background information and recommendations for federal, state, and local government level changes in each of eight major

service areas. Also examined is information gained from interviews of 77 families with hearing and visually handicapped children who appreciated services received but saw needs for improvement in areas such as local services.

Kirkman, R. E. Career Awareness and the Visually Impaired Student. Education of the Visually Handicapped, 1983, 14(4), 105-14. (EC 151 324 8306)

Special career awareness and career exploration activities were developed for blind and visually impaired elementary and secondary students during 1981 and 1982. Thirteen career awareness modules were developed for use in regular class settings, along with modules for students on career clusters and career identification and job placement. The materials will assist special educators to understand the role and scope of career awareness activities, especially as they relate to the regular instructional program, and will help prepare students for an appropriate career while informing them about the total work world.

Lapham, E. V. S., Ed.; and others. Setting Our Sights: Current Trends and Future Directions. Proceedings and Highlights of the New York State Conference on Educational Issues of Students with Visual Impairments (April 6-7, 1979), 1980. (ED 210 895)

The conference report contains background information on organizing the April, 1979, New York, conference on educational issues of students with visual impairments; results of a preliminary needs assessment questionnaire; texts of 12 conference presentations; the conference evaluation results; and the program. The needs assessment questionnaire provided for the identification of topics that respondents considered of highest priority for conference consideration. High priority topics selected included effective utilization of low vision and needs of parents with visually impaired children. Conference presentations are organized into the categories of policy, individualized educational plans (IEPs), low vision, multihandicapped students, and specialized skills.

Lincoln Land: A College on the Move. Community College Frontiers, 1975 3(3), 28-31. (ED 117 992)

Lincoln Land Community College (Springfield, Illinois) serves a population with a mixture of industrial, agricultural, and commercial interests in a geographical area of 3,240 square miles. This article describes its special programs for the blind, the placement of its graduates, and some of its programs and problems.

Link, H. J. Placement and Employment of the Visually Impaired: State of the Art and Identification of Unmet Needs. New Outlook for the Blind, 1975, 69(7), 320-324. (EC 080 195 0000)

Described are vocational rehabilitation and other federal legislation that have resulted in job opportunities for blind persons, and specific employment areas that have attracted visually impaired individuals over the past decade are discussed. Results are reported from two surveys conducted to identify the special problems encountered by rehabilitation staff in providing effective training, placement, and employment services for blind persons, and to identify unmet needs in these areas.

Mann, L., Ed.; Sabatio, D. A., Ed. The Fourth Review of Special Education. New York, NY: Grune and Statton, Inc., 1980. (EC 132 134 8106)

Several papers provide state of the art articles on major topics in special education. Papers have the following titles and authors: "Education of the Visually Handicapped: An Overview and Update" (P. Hatlen et al.); "Learning Disabilities: A Review of Selected Topics" (J. Lloyd et al.); "Applied Behavior Analysis and Behaviorally Disordered Pupils: Selected Issues" (M. Epstein et al.); "Review of Educational-Treatment Procedures for Autistic Children" (A.Egel et al.); "Changing Perspectives in the Education of the Gifted" (B. Ford, R. Jenkins); "Biofeedback Applications with Handicapped Children and Youth" (S. Striefel, R. Baer); "Technology in Special Education" (A Blackhurst, A. Hofmeister); "Nondiscriminatory Assessment: Perspectives in Psychology and Special Education" (T. Kratochwill et al.); "Labels and Expectancies for Handicapped Children and Youth" (R. Algozzine, C. Mercer); "Implications of Mainstreaming: A Challenge for Special Education" (M. Abramson); "Career and Vocational Education for the Handicapped: A Historical Perspective" (S. Miller et al.); "Personnel Preparation in Special Education" (R. Schofer, M. Lilly); "Role-Model Complements of School Psychology with Special Education" (T. Miller, C. Dyer).

Martin, V., and others. College Preparatory Program for Visually Impaired Students: An Evaluation. Journal of Visual Impairment and Blindness, 1978, 72(2), 55-58. (EC 104 138 0000)

Feedback from students and their rehabilitation counselors indicated that a nine-week college preparatory summer program for visually handicapped secondary students increased student readiness in communication, studying, personal-social skills, and mobility.

McLaughin, P. J., and others. Vocational Curriculum for Visually Impaired Persons, 1979. (ED 178 755)

Presenting a range of occupations with a cross-section of task-analyzed job skills and teaching procedures, this curriculum guide is divided into ten chapters. The first chapter summarizes vocational programming for visually

impaired individuals and describes how to use the curriculum. The next three chapters present information on three areas in vocational rehabilitation of visually impaired individuals: prevocational training techniques, competitive employment training, and traditional and alternate methods of vocational evaluation. The remaining chapters present the curriculum itself.

Monahan, L. H., and others. Blind Students: Transition from High School to College. Journal of Visual Impairment and Blindness, 1978, 72(3), 85-87. (EC 104 141 0000)

An evaluation of approximately 200 visually impaired high school students, conducted by The Florida State University Counseling Center over a ten-year period, indicated that 75% had good potential for successful college work. A follow-up study of available students revealed that only 25% had been successful in completing their degrees, and that there was a 32% dropout rate. In an attempt to reduce the dropout rate, a "College Orientation Program for the Visually-Handicapped" was established to help students to make the difficult transition from high school to college.

Mori, A. A. A Survey of the Perceived Importance and Frequency of Practice of Career Education Tasks by Secondary Teachers at Residential Schools for the Blind. Journal for Special Educators, 1983, 19(3), 29-36. (ED 162 331 8411)

Questionnaires completed by teachers and administrators from 46 residential schools for the blind revealed that while almost all of the career education activities mentioned in the questionnaire were viewed as important, they were not practiced with corresponding frequency in the classroom.

National Conference on Career Education. January 15-17, 1973, New Orleans, Louisiana, 1973. (ED 082 407)

Presented are reports from ten states on present status of and future plans for career education for blind and visually handicapped children and adults. The reports represent a major aspect of a conference sponsored by the American Foundation for the Blind in which state leaders in special education, rehabilitation, and vocational education considered strategies for collaborative efforts. Typically considered in the reports are ongoing programs, the roles of the three component divisions, state needs assessments, and timetables for future programs.

O'Brien, M., and others. Experimental Training and Placement of Blind Persons in Two-Year Allied Health Fields (1977-1980). Final Project Report, 1981. (ED 206 356)

In 1977, Saint Mary's Junior College initiated a project to determine the feasibility of educating and placing blind persons as occupational therapy assistants and

physical therapy assistants. Faculty and project staff worked together to develop tactile models and diagrams, enriched verbal descriptions, and supplementary audiotapes to be added to usual classroom instruction. Adaptations were also made in testing services, reader services, peer tutoring, and classroom demonstrations, and special equipment was purchased.

Read, S. TRIO Special Services Program Evaluation, University of Minnesota. Final Report 1982-83, 1983. (ED 246 719)

An evaluation of the TRIO/Special Services Program at the University of Minnesota, General College, is presented. Descriptions are provided of program operations, services offered, the program participants and student eligibility. Program effectiveness is also assessed in terms of student outcomes, and individual program services are examined as an internal feedback measure. Attention is directed to the goals, organization, and services offered by the special services program at the college.

Reardon, R. C., and others. A Self-Directed Career Planning Program for the Visually Disabled. A Manual for Replicability. Final Report. Tallahassee, FL: Florida State University, Career Information Service, 1978. (EC 113 972 0000)

The manual describes a self-directed career planning program for the visually disabled. The goal of the project is described as translating the values, purposes, and resources of the Curricular/Career Information Service of the Florida State University into formats that could be easily used by the visually impaired. The manual details the four tasks of the projects: (1) transcription and organization of career information; (2) development of an assessment device (Self Directed Search or SDS) which could be taken, scored, and interpreted by a blind student; (3) formation of a large type and braille alphabetical catalog; and (4) evaluation of the materials and goals. Much of the manual is appendixes including information on the SDS, user evaluation results, and copies of module instruction sheets.

Resource Manual for Counselors of Visually Impaired Students, 1978. (ED 158 453)

Intended for the individual providing vocational guidance to the blind student, the publication is based on a conference on attitudes toward blindness and occupations blind persons are pursuing.

Rudolph, J. E. Development of a Work Practice Center for Visually Impaired Multihandicapped Adolescents, 1980. (ED 196 212)

The development of a work practice center for visually impaired multihandicapped adolescents in a residential

school for the blind is described. The purpose of the center is explained to be preparation of work habits and skills for adult placement in sheltered employment settings.

Russell, G. H. A Five County Vocational Skills Training Program for the Blind. Project Document, 1972. (ED 073 579)
Assembled are the ideas, techniques, and written documents of a 3-year, five-county vocational skills training program designed to provide vocational skills and counseling to blind and partially sighted students in grades 7 through 14 within regular vocational classes. Technical and industrial arts, homemaking, and work experience are vocational areas emphasized by the program. Included in the introduction to the visually handicapped student are four methods of orientation and mobility. Teacher preparation is discussed and a referral system explained. Questions of regular vocational teachers are answered. Described are tests used in the program. Equipment and supplies suggested for industrial education and daily living skills are listed with prices and sources. For related documents see EC 051 030, EC 051 031, and EC 051 033.

Russell, G. H. A Five County Vocational Skills Training Program for the Blind. Evaluation Document, 1972. (ED 073 580)
Evaluated was a 2-year, five-county vocational program for visually handicapped, junior high, secondary, and junior college students designed to encourage skill development of the student and inservice training of the regular instructor. Evaluation was by means of two questionnaires. Two of the six conclusions after analysis of the data are that partially sighted and blind students can be successfully integrated into regular programs and that regular vocational educators will enroll blind and partially sighted pupils if they receive inservice training. To further vocational education for the visually handicapped, project evaluators made nine recommendations of which the following are examples: the replication of similar projects in other regions, the development of an itinerant inservice team at the state level, and the establishment of a clearing house at the state level for career and vocational materials for the handicapped. For other program documents see EC 051 030 through EC 051 032.

Sanspree, M. J.; McGrath, G. Career Planning Modifications for the Visually Impaired Learner, 1983. (ED 242 138)
Modifications of educational programs can enable visually impaired learners to benefit from career planning from elementary through secondary grades. Exploration and mobility issues are critical, and the student must acquire personal awareness in respect to the environment before basic work tasks can be performed. Classroom adaptations that require the visually impaired child to develop independence in traveling are important parts of the curriculum.

Self-Study and Evaluation Guide/(1975 Edition). Section D-6: Vocational Services. National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, 1975. (ED 164 934)

This self-study and evaluation guide on vocational services is one of 28 guides designed for organizations that are undertaking a self-study as part of the process for accreditation from the National Accreditation Council (NAC) for Agencies Serving the Blind and Visually Handicapped. Provided are lists of standards to be appraised by the self-evaluation teams or the extent to which the organization meets the standards. Areas of standards considered are planning for vocational services; vocational rehabilitation personnel; vocational evaluation; work adjustment; vocational training; placement, followup, and post-employment; and evaluation. (Other accreditation guides are available--see note.)

Self-Study and Evaluation Guide/1979 Edition Section D-22: Program for K-12 Students. National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, 1979. (ED 165 418)

The self-study and evaluation guide presents accreditation standards for programs serving blind and visually handicapped students in grades K-12. Standards are included for the following 12 areas: planning and organization, personnel, communications, community and career education, creative arts, home and industrial arts, mathematics and science, physical education, prevocational and vocational education, study skills, work experience programs, and program evaluation.

Sica, M. G. Blind Persons Report Critical Incidents of Science and Mathematics Instruction, 1982. (ED 220 280)

This project identified over 500 critical incidents of successful and unsuccessful instruction in science and mathematics courses reported through interviews of 105 blind college students. The principal categories of effective teacher behavior included planned concrete learning experiences, creative use of learning materials, and detailed descriptions/instructions. Principal consequences of effective teacher behaviors included cognitive learning and emotional satisfaction with the learning process. Reasons for positive perception of the learning process included being provided with access to information, enhanced motivation/interest, social interaction, and flexible time allotments. Ineffective teacher behaviors included absence of detailed directions/explanations, lack of planned concrete learning experiences, and inappropriate materials, resulting in reduced learning and dissatisfaction with the learning process due to lack of access to information and reduced interest/motivation. These critical incidents may

be used to improve instructional practices to help blind students progress in science and mathematics courses at the post-secondary level.

Smith, C. R. An Analysis of the Effectiveness of a College Preparatory Program for the Visually Impaired, 1969. (ED 039 658)

A nine-week summer college preparatory program for the visually impaired provided counseling and training in academics, mobility, and vocational areas. To determine its effectiveness, tests were administered to its 27 participants and to 18 controls. Results indicated that self concept was a significant variable in discriminating between the two groups and in predicting students likely to persist through the freshman year. The semantic differential techniques also rendered data significant both as a discriminator and a predictor. Anxiety was found not to be significant; attrition was greatest among the 18 controls.

Stehling, A. Feasibility Study and Development of a Program to Train Visually Impaired Students in Computer Programming. Final Report, 1979. (ED 234 173)

A two-phase study investigated the employment opportunities for visually impaired computer programmers and the practicality of training at a community/junior college. A list of subjects to be taught was developed, and a 21-month curriculum was designed. Recommendations were made regarding entry-level criteria, special devices and equipment, personnel, building space requirements, special training for instructional personnel, special services for visually impaired students, job placement, and public relations.

A Study of the Vocational Success of Groups of the Visually Handicapped Final Report, 1979. (ED 036 030)

The purpose of this project was to examine factors that seem to contribute to the vocational success of a group of visually handicapped persons. The population included 939 subjects for whom test data were available; 644 were interviewed and 207 were retested on various standardized measures. Instruments were developed to obtain initial data from school and agency records and current data from the subjects themselves. Findings showed a high percentage unemployed; those employed had in general an annual income below the median for the general population and were engaged in a narrow range of occupations. Variables that seemed to be most related to vocational success included IQ, sex, other disabilities, travel ability, and level of education.

Swearengen, M.; Mosley, B. The CI-TAB Secondary Program: Career Information and Training Activities for the BIind, 1975. (ED 129 032)

Presented is the CI-TAB (Career Information and Training Activities for the Blind) Secondary Program, a program providing career education for visually handicapped and blind high-school students to be available in braille and cassette recordings. Five general discussions (each including a list of concepts covered, suggested learning activities, and a list of test questions) are provided on the following topics: (1) producers and consumers, and goods and services; (2) employment agencies, job placement services, unions, and social security; (3) resumes, applications, and interviews; (4) job classifications and volunteer service; and (5) independence, responsibility, and freedom. Thirty job descriptions are included. Also included are general suggestions for career education and a list of approximately 50 sources of supplementary vocational materials.

Swearengen, M. The CI-TAB Middle School Program: Career Information and Training Activities for the Blind and Visually Handicapped. Louisville, KY: American Printing House for the Blind, 1976. (ED 126 668)

Presented is the CI-TAB (Career Information and Training Activities for the Blind) script of 23 cassette recordings providing career education for visually handicapped and blind middle-school students. Included are eight study units titled: "What Work Is," "Why People Work," "How People Find Jobs," "What People Do in Certain Jobs," "Why Some Jobs Pay More," "Working Conditions," "Interests, Aptitudes, Personalities," and "How Schools Prepare for Jobs." Each unit is accompanied by a list of concepts to be developed, suggested learning activities, and tests. Fourteen job descriptions give first person accounts of the experiences of visually handicapped or blind workers.

Tannenbaum, R. L. Where the Money Is for Visually Impaired College Students: Financial Aid Information for Higher Education. Journal of Visual Impairments and Blindness, 1984, 78(6), 248-50. (ED 170 225 8501)

The article summarizes financial aid programs available from national blindness agencies, state vocational rehabilitation agencies, and the federal government. Application procedures and contact addresses are listed.

Training and Employment Opportunities for the Visually Handicapped. A Survey, 1973. (ED 095 682)

Reported is an international survey on training and employment opportunities for the visually handicapped. Described are responses to a questionnaire carried out jointly by the Committee on Professional and Urban Employment of the World Council for the Welfare of the Blind, The International Labor Organization and the Swedish National Labor Market Board.

Transition Education and the Disabled: A Bibliography Prepared by the AEC Standing Committee on Transition Education, EDRS, 1981. (EC 142 163 8207)

The annotated bibliography presents 73 citations designed to help teachers and employers better understand the needs and career aspirations of handicapped school leavers in Australia.

A Transitional Pre-Vocational Training Program for Visually Impaired Severely Multiply Handicapped Youths. Final Report, September 4, 1980-June 18, 1981. (ED 206 903)

St. Joseph's School for the Blind (Jersey City, New Jersey) cooperated with the Occupational Center of Hudson County to establish a model transitional prevocational training program for severely multihandicapped, visually impaired students. The aim was to assist these students to move from a school environment to a work activity setting where gainful employment opportunities exist.

Tyler, G. T. Vocational Information Seminar. Journal of Visual Impairment and Blindness, 1982, 76(10), 419-20. (EC 151 817 8308)

A weekend seminar provided by a county cooperative school program's vocational rehabilitation counselors for 21 visually impaired clients, aged 17 to 20, consisted of vocational information and suggestions on ways to manage transportation and socialization at the onset of a job. Speakers from career areas such as the engineering, teaching, health, and rehabilitation fields described their education and employment experiences.

Vincent. A. T. CAL for Blind Students: Some Recent Developments. Microcomputers and Teaching. Computer-Assisted Support for Blind Students, Project Report, 1982. (ED 222 168)

This report describes a project which commenced in 1980 at the Open University in England, the object of which was to provide blind Open University undergraduate students with home-based computing facilities through the use of low-cost commercially available microcomputers and speech synthesizers. The development of computer programs that incorporate synthetic speech output routines, the configuration of TRS-80 computer for computer-assisted learning (CAL) that incorporates synthetic speech output, and BASIC programming employing speech output facilities are discussed.

Visually Impaired Curriculum Guide, 1982. (ED 226 538)

The curriculum guide provides guidelines for developing academic and living vocational skills in visually handicapped students from preschool to adolescence. The document, divided into two sections, outlines objectives,

teaching strategies, and materials for each skill area. Each skill area section in the guide is preceded by an introduction which offers information on teaching methods, sample projects, and planning. Appendixes include a program overview chart, a student profile/checklist, and a list of resources.

A Vocational Education Program for Blind Children and Youth. Phase I Final Report, 1972. (ED 072 607)

Reported was a project in which the Maryland School for the Blind first conducted surveys of occupational opportunities for the visually handicapped in Maryland and the employment history of adults who attended the Maryland School for the Blind between 1961 and 1971 and then developed a pilot vocational education program in response to survey findings. Approximately 460 employer and 150 former student responses were analyzed.

Wacker, C. H., Jr. Where Are They Now? Toward More Effective Vocational Goal-Setting for Blind Adults. New Outlook for the Blind, 1976, 70(1), 19-21. (ED 081 204 0000)

Described is a survey of 300 blind adult clients of a vocational training agency which was conducted to determine, among other facts, their employment status after leaving the program. Several findings about client self-motivation, self-confidence, and vocational goal-setting are illustrated in six case studies. Based on the findings and a review of the vocational goals of ten clients with psycho-emotional handicaps which can cause aberrant goal-setting behavior.

Weisgerber, R. A.; de Haas. The Potential of Environmental Sensors for Improving the Mobility Performance of Mainstream Blind Students. Final Report, 1978. (ED 175 203)

The report describes an effort to develop and test instructional materials, techniques and procedures--ESSETS (environmental sensing, selection, evaluation and training system)--for teaching functionally blind young adults to use electronic travel aids (ETAs). Among conclusions formed were that the ESSETS materials were workable in the field and that students who participated in the study seemed to find the experience satisfying and were able to accomplish many more tasks successfully with their ETAs than without them.

Wilkison, W. K., and others. CAI for the Visually Handicapped: Promising Collaboration Between Two and Four-Year Schools, 1976. (ED 129 351)

This report describes the efforts of the Office of Research and Extension of the North Carolina State University (NCSU) School of Education to develop vocal computer-

assisted instruction (CAI) tutorials for blind junior college students, the rationale behind those efforts, the costs and means of funding for the project, and suggested ways in which such materials may be launched in the state school system.

Woal, S. T. A Career Education Program for Visually Handicapped Students. Vocational Guidance Quarterly, 1974, 23(2), 172-3. (EC 070 894 0000)

A career education program provided partially sighted junior high school students with information about 400 occupations and included opportunities for development of a positive self-image, interaction with sighted peers, identification with successfully employed visually handicapped persons, and field trips to firms employing handicapped workers.

Woal, S. T. A Career Education Program for Visually Handicapped Students. Vocational Guidance Quarterly, 1974, 23(2), 172-173. (ED 112 251)

Article discusses the transcription into braille of the "Room to Grow" program, which gives handicapped students a means for developing career education insights in both affective and cognitive areas.

Wurster, M. V. Career Education in 1975. New Outlook for the Blind, 1975, 69(4), 155-59. (EC 072 539 0000)

Emphasis on career education in elementary and secondary schools led the American Foundation for the Blind (AFB) to promote activities to develop relevant resources and materials for use with blind and partially sighted students. Efforts to prepare visually handicapped persons for the world of work will center on aspects such as vocational education, work-experience programs, on-the-job-training, and placement opportunities.

Wurster, M. V. Where We've Been and Where We Are. Education of the Visually Handicapped, 1983, 14(4), 99-104. (EC 151 323 8306)

The concept of career education, promoted by the federal government in the early 1970s, applies to visually impaired children and youth as well as sighted students. Since career education encompasses education and training for life roles, including daily living skills and academic and career education, it must become better integrated and focused for visually impaired children during the early years. The American Foundation for the Blind and the State of Texas have created career education materials suitable for visually impaired students, including units adapted for grades kindergarten through 6.

Yazvina, A. General Principles of Organization of Production, 1972.

Briefly described with accompanying photographs are development of employment opportunities for the blind and the current status of production by the blind in the Union of Soviet Socialist Republics. Cited is incidence of the blind in specialized schools and professions such as the law.